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# THE JOURNAL

OF THE

## Missouri State Medical Association

THE OFFICIAL ORGAN OF THE STATE ASSOCIATION AND COMPONENT SOCIETIES

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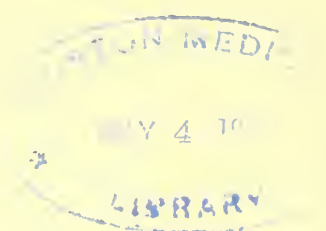
E. J. GOODWIN, M.D., Editor

OFFICE OF PUBLICATION, 3529 PINE STREET, ST. LOUIS, MISSOURI

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## INDEX TO VOLUME XVI

JANUARY, 1919, TO DECEMBER, 1919



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other conditions being equal, the greater the driving force of the heart, the greater will be the velocity of the blood flow and the higher the blood pressure, and vice versa.

Second: "Whatever increases or diminishes the resistance offered to the blood in passing from the arteries to the veins will cause the velocity and the arterial pressure to vary in an adverse sense as regards each other." The greater therefore the peripheral resistance, other conditions also being equal, the less will be the velocity of the blood, but the higher the blood pressure, and vice versa. This intimate inter-relation between the pump action of the heart and the maintenance of the proper caliber of the arterial tree, through the vasomotor system, cannot fail therefore to impress us with the great importance of these two factors in the circulation of the blood in health.

According to Adami<sup>3</sup> and Nichols, the muscular arterioles then as guarding the gateway into the capillaries are, with the heart, the main agents in maintaining the circulation, and as a rule through the marvelously developed vasomotor apparatus they act in absolute harmony with the heart on the one hand and with the needs of the individual organs on the other.

The remaining two factors in the circulation of the blood in health, viz., the volume of the blood within the vessels and its viscosity, are practically very little concerned in the circulatory disturbances of disease, and therefore considered as almost negligible in this study.

Hypertension is considered today to be due to stimulation of the vasoconstrictor fibers supplying mainly the arterioles resulting in their vasoconstriction and consequent increase in peripheral resistance and rise in blood pressure. The cause of this vasoconstriction is assumed to be the presence in the blood of certain substances having the power to stimulate the vasoconstrictor apparatus.

As Lauder Brunton says, this condition is demonstrable in migraine, where the blood pressure is found raised through vasoconstriction of the arteries or arterioles, and as a matter of fact the superficial vessels as the temporals can actually be seen firm, contracted and whipcord like; a condition which is generally conceded to be due to errors in diet resulting in imperfect metabolism, developing poisons which produces vasoconstriction through stimulation of vasoconstrictor system of nerves.

To quote Adami again: "Arterial contraction and particularly a generalized arterial contraction is the primary cause of heightened blood pressure. The persistent rise of blood pressure, or the condition termed by Sir Clifford Allbutt as 'hyperpiesis,' is the commonest precursor of arteriosclerosis." The name given

thirty years ago by Gull and Sutton of arterio-capillary sclerosis is quite defensible, and that because a fibrosis of the arterioles characterizes the most important group of cases and has a clear relationship to the development of the changes in the larger arteries.

There are then two main causes of arteriosclerosis: (1) Increased strain thrown on the arterial wall by heightened blood pressure, and (2) a weakened state of the wall either from congenital causes or disease. Hence, there may be arteriosclerosis with high and with low blood pressure. If the pressure be normal and the walls weakened the results are of the same order as when the pressure is heightened but the walls of normal resisting power. It is not the hypertension alone which causes arteriosclerosis, but it is the ratio between the resisting power of the vessel wall and the pressure to which it is subjected from within, and it follows as a natural corollary that the arterial tree is not equally resistant in all its parts; hence in some subjects the large vessels are mainly affected, in others the small ones and in still others the changes are universal.

Calcification of arteries of the second and third degree may be extreme, becoming like rigid tubes. In them we have demonstrated most strikingly the thinning and giving away of the media beneath the overlying great thickening of the intima. In one important series of cases we have stimuli acting on the media of the smaller arteries causing tonic contraction or hypertonus with resulting hypertension, the strain of which causes atrophy and degeneration of the media with a compensatory fibrosis of intima. In the other class of cases we have the same pathological conditions resulting from weakness either inherited or acquired of the median coat but without any preceding hypertension.

Thus do Adami and Nichols present the subject, and it would seem to us that we may add that in the first class of cases we may have a fixation so to speak of the arterial tree in a condition of vasoconstriction either from the sclerotic process or from persistent hypertonic contraction, giving us the refractory vasomotor response and irreducible hypertension; while in the second we have fixation of the arterial tree which has not been preceded by vasoconstriction and, therefore, no element of hypertension. Arteriosclerosis therefore may be divided from the standpoint of causation into (1) senile or involuntary, which is not accompanied by hypertension; (2) luetic, which is not per se hypertensive; (3) hyperpiesis, which, resulting from vasoconstriction primarily, is therefore practically always accompanied by increased blood pressure.

The greater the degree of these pathological changes the greater the loss of the function of

3. Principles of Pathology, Vol. 11, 2nd Edition.



the elastic and muscular coats of the vessels and of the vasomotor response until their more or less obliteration when the walls of the arteries and the arterioles become absolutely rigid and fixed from calcareous degeneration.

Some have argued that such a fixed condition in the arteries and capillaries could never become possible because of its interference with the vasomotor control of the metabolic processes. The answer to which is that with the pathologists granting calcareous degeneration of the arterioles and capillaries, it is inconceivable how a rigid fixed calcareous vessel wall can to any extent retain its vasomotor response. Then, too, we do frequently have a definite disturbance of metabolism in arteriosclerotics resulting in progressive loss of weight, which cannot be reasonably explained on any other basis than that of deficient blood supply to the tissues.

Howell does not deny such a possible disturbance in metabolism as just above stated, but avers that such a condition has not been as yet scientifically demonstrated.

According to Janeway:<sup>4</sup>

(1) "Hypertension may arise through purely quantitative reduction of kidney substances below the factor of safety—it is difficult to consider this as other than a muscular hypertonus due to retained poisons of some kind. Its clinical paradigm is the hypertension accompanying bilateral ureteral obstruction or in the unfortunate surgical removal of the only functioning kidney. Possibly it is one factor which helps to produce hypertension in the contracted kidney."

(2) "Hypertension may arise in connection with unknown intoxication which causes disturbances of the central nervous system and which we call uremia. This intoxication is not one of retention in the strict sense of the word, although it is not uncommonly present in those cases of advanced nephritis which manifest marked nitrogen retention—clinically, it is associated with severe acute nephritis, sometimes at its very onset, besides the subacute and chronic affections of the kidney."

(3) "Hypertension may arise in primary irritability of the vasoconstricting mechanism, from unknown extra renal causes, which leads eventually to arteriosclerosis. In this type the disease in the kidney is the sequence not the cause of the generalized vascular lesion. When it progresses to a condition of extreme atrophy, resulting in true primary contracted kidney, a renal element may be added to the existing hypertension. In some cases arteriosclerosis may spread peripherally and produce a similar form of disease. In these forms of primary vascular disease it is probable that eventually

widespread narrowing of the arterial stream bed in some cases produces a permanent organic increase in peripheral resistance."

It has generally been assumed in the past that hypertension was of renal origin. That by loss of functioning tissue in these organs, toxic products accumulated in the blood which produced vasoconstriction so that thereby through raising of blood pressure more blood might be driven into the kidneys in a given time, and their disturbed function in this way maintained. In other words, that the hypertension was a compensatory conservative condition and that therefore it was dangerous to try to lower blood pressure because the result would be a falling urine supply and uremia.

Lawrence,<sup>5</sup> however, found that clinical reports were by no means unanimous in declaring hypertension to be conservative and protective, and quotes numerous investigators to the effect that a lowering of pressure was coincident with improvement. Experimental studies also show that (a) decreased renal tissue is not the cause of hypertension; (b) that the latter does not cause an increased blood flow through the kidney; (c) that hypertension is not accountable for the polyuria. There undoubtedly also is a large group of cases, as stated by Janeway, in which the hypertension and arteriosclerosis are the primary conditions, the sclerotic process extending later to the renal arteries developing the arteriosclerotic kidney as a secondary condition. It is with this and the other extra-renal groups that our study is especially concerned.

Janeway,<sup>6</sup> in 458 patients with systolic pressure of 160 or over, found 116 with neither albumin nor casts, and 91 with albumin but without casts, or casts without albumin, and though it may be contended that there may be nephritis without evidence in the urine, still pathologists hold that normal kidneys are found in cases of hypertension, and it has been demonstrated that while renal disease and hypertension are frequently associated, the kidney changes cannot be held as the sole cause of hypertension.

While therefore there may be certain cases in which the disease originating mainly in the kidney, there may result from deficient kidney function the accumulation of certain substances in the blood which, exerting a vasoconstrictor influence, may cause hypertension, yet such hypertension under these conditions may be considered simply as a necessary result of the kidney decompensation, and therefore not as compensatory or conservative, and furthermore as being capable of being lowered where vasomotor response is not yet lost without necessarily any increase in the renal decompensation.

5. The Relation of Hypertension to Urinary Secretion, *Amer. Jour. Med. Sc.*, September, 1912, 330.

6. *Amer. Jour. Med. Sc.*, 1913, cxiv, 625-656.

4. *Blood Pressure, Its Clinical Application*, 1916.



pensation. And again the same agencies which produce the hypertension and the arteriosclerosis may cause also the nephritis. In fact, it is more generally considered that these substances in the blood causing vasoconstriction and called therefore "pressor substances" result most probably from faulty metabolism, especially in the protein group, for the end cleavage results of the carbohydrates and hydrocarbon are  $\text{CO}_2$  and  $\text{H}_2\text{O}$ , which together with salts are nontoxic in relation to the cardiovascular system. Protein cleavage going through the successive stages of albumose, peptone and amino acids, the latter being absorbed to repair tissue catabolism, and any portion above these needs adds just so much more waste for kidney elimination resulting in more or less nitrogen retention. Excessive protein diet also results in undigested proteins being reduced in the large bowel by putrefactive bacteria and the formation of simpler products by digestive enzymes which are highly toxic, and which not being destroyed by the detoxicating influence of the liver, enter the general circulation and become so-called pressor substances. The majority of cases of hypertension show an excess of nonprotein blood nitrogen in the blood.

More recently Voegtlin and Macht succeeded in isolating from the blood serum a crystalline pressor substance, whose pharmacologic action is different from epinephrin and from any other body heretofore obtained from the blood. It produces marked cardiac stimulation and a prolonged vasoconstrictor effect. They considered it related to cholesterin on the one hand and the adrenal cortex on the other.

Foster, in 1915, reported isolation of a crystalline substance from blood of uremic patients which raised blood pressure, but the true nature of neither of the above bodies is as yet definitely known.

Perhaps the next best accepted causes of hypertension are the various focal infections, as in the teeth, the accessory sinuses to the nose and elsewhere in the body.

Students in endocrinology have advanced the hormonal theory. In chronic cyanosis due to failing heart we have hypertension due to stimulation of vasoconstrictors from overloading of blood with  $\text{CO}_2$ . In some cases of polycythemia we have, without as yet adequate explanation, a high blood pressure.

We divide the effects of hypertension as follows: (1) on the arteries; (2) on the heart; (3) on the kidney.

The effect of hypertension on the arteries is:

1. Through the vasoconstriction to interfere with the dilation of the arterial tree in the receipt of the cardiac systolic output and to limit the elastic recoil of the arterial wall in

diastole and the consequent carrying forward of the blood column.

All the above disturbances in the vasomotor response of the arterial tree becomes progressively increased as sclerosis and calcareous degeneration follow on the heels of the strain on the vessel wall of hypertension.

The effect of narrowing of lumen of the arterial tree whether from simple vasoconstriction or fixation tends to greatly increase peripheral resistance.

2. These effects of hypertension on the arteries involve the cardiac function as follows:

The heart is deprived of the great assistance rendered the organ by the elastic dilation and increase of the caliber of the arterial tree for the receipt of the systolic cardiac output, as also through the removal of the force exercised during the cardiac repose by the elastic recoil of the vessel walls—so that the strain on the heart is greater both during systole and diastole.

The strain increases as the arterial disease progresses from vasoconstriction through sclerosis to calcareous degeneration of vessel walls.

The work of the heart is greatly augmented by the increased peripheral resistance consequent on vasoconstriction sclerosis and calcareous degeneration of the arterial tree.

The cardiac compensation established to meet this tremendous increase in work through hypertrophy, especially of left side of the heart, reaches a point finally as in valvular disease when muscular fatigue results and when dilatation begins to predominate over hypertrophy and finally there is depicted the scene of decompensated cardiac disease with all its dire consequences on to the fatal termination.

This break in cardiac compensation may be hastened by sclerosis or calcareous degeneration of the coronary arteries leading to chronic myocarditis, myocardial degeneration, or cardiosclerosis.

3. This same arterial vasoconstriction, sclerosis and calcareous degeneration may extend into the renal arteries resulting in degenerative changes in the renal parenchyma and secondary fibrosis in the interstitial tissue, resulting finally in the typical sclerotic kidney.

Cardiac decompensation develops the kidney of stasis which may increase the already existing renal decompensation.

Renal decompensation developing in the sclerotic or kidney of stasis, tends to increase the toxic substances in the blood establishing a tendency towards a vicious circle.

We have seen in thus reviewing the status of the question of hypertension today that it has been considered by some clinicians as a compensatory conservative condition that must not be lowered for fear of precipitating thereby either renal or cardiac decompensation, and

even those who have doubted this doctrine because of observing cases from time to time where improvement followed in both cardiac and renal decompensation with fall in blood pressure, still have as yet offered no explanation for their doubts. It is our hope to carry the solution of this question perhaps a step further in an effort to show that, in hypertensive cardiovascular renal disease, first, hypertension is never conservative. Second, hypertension therefore should be reduced whenever possible.

Where the vasomotor response is retained hypertension is never conservative and is only necessary when the vasomotor response is refractory or lost to be ultimately destructive when blood pressure is found permanently irreducible.

These statements will be made more clear by the following classification of cardiovascular renal disease which we now also offer merely as a working hypothesis, which, however, we hope to be able to establish as true through future study.

The cases are first divided into:

A. Those with vasomotor response retained and therefore with mobile arterial tree.

B. Those with vasomotor response lost or refractory arterial tree.

Group B is further divided into:

Vasomotor response refractory temporarily or permanently through presence in blood of irremovable pressor substances.

Vasomotor response permanently refractory from sclerosis or calcareous degeneration of arterial wall.

And from these main divisions are derived the groups represented in the charts, which embrace fifty-three cases studied under the following conditions:

1. These patients were selected from the general admissions to the internal medical service and out-patients department of Barnes Hospital, and a few from our own private clientele, who had at least one systolic reading of 160 mm. of Hg or more, and in whom blood pressure records had been kept.

2. The Faught mercury instrument was used up to July, 1917, and after that the tycoose spring instrument checked up by the mercury apparatus was employed. The auscultatory method was resorted to in all cases.

3. The physical examinations were in all the hospital cases checked up by Drs. Dock and Robinson, and also Dr. Andrews, the house physician, the interns and ourselves, and all doubtful points were studied with the aid of the x-ray and of the electrocardiogram. The diagnosis was confirmed by necropsy in some of the cases.

4. The presence of arterial sclerosis was determined by careful examination in the majority of the cases of radial, brachial, temporal, femoral, posterior tibial and dorsalis pedis arteries, and in some cases also of the retinal vessels; and in a few cases through post-mortem findings.

5. None of these cases were observed from our standpoint by the other members of the internal medical staff, so that the observations made by them had the greatly added weight of being entirely unbiased.

After consideration of any possible focal infection the treatment of this group of cases consisted mainly:

1. In the hospital group of absolute rest whereby were limited not only the number of heart beats, but also the catabolic processes.

2. The diet which generally was that designated in the service as low nephritic in which the protein intake was greatly limited, some were on largely a milk diet, while others were placed on a strict Karrel regime.

3. Elimination with the object of removing the so-called pressor substances from the blood: (a) through the bowel, (b) through the skin, (c) through the kidney.

(a) Through the bowel: Resort was not only had to purging the intestinal tract through the salines, but to also clear out thoroughly the portal circuit through the administration of the so-called cholagogue remedies, as calomel, bluemass, the C. C. pills, etc., whereby to prevent the toxic products of protein cleavage reaching the liver through the portal vein and which escaping the detoxicating influence of the hepatic function, to gain access to the blood.

(b) Through the skin: The daily toilet of the skin to increase its activity and with uremic tendencies, sweat baths, etc.

(c) Through the kidney: When not contraindicated by edema, systematic water drinking and, where sufficient kidney parenchyma remained, of such diuretics as diuretin, agurin and theosin.

4. The vasodilator group of remedies were used to meet emergencies.

5. An assayed tincture of digitalis was used in the cases of cardiac decompensation, and with the presence of auricular fibrillation the digitalis was administered in massive doses.

6. A minimum amount of opium was ordered and when possible codeine was preferred to morphin because of its interfering less with the urine output.

7. The serous sacs were kept emptied of accumulations not only for the relief of dyspnea, but also because of the interference especially of pleural exudates with the respiratory assistance to the circulation.

TABLE 1.—VASOMOTOR RESPONSE RETAINED, BLOOD PRESSURE LOWERED BY VASODILATION, CARDIAC AND RENAL COMPENSATION CONSERVED

Case No.	Sex	Race	Age	Symptoms	O.C.D.	Vessels	Blood Pressure		P.S.P.		Urine		N.P.N.		Diagnosis	Result	Days Observed
							Entrance	Discharge	Ent.	Dis.	Entrance	Discharge	Ent.	Dis.			
3798	F	W	29	Compensation good	3-12	Not thickened	175-90	130-70	73	..	Alb. 0 Casts 0	Alb. 0 Casts 0	33	..	Arteriosclerosis	Not disturbed	22
2957	F	W	64	Compensation good	3-15	Thickened	210-90	143-72	68	..	Alb. 0 Casts 0	Alb. 0 Casts 0	16	..	Arteriosclerosis	Not disturbed	92
2476	M	W	62	Compensation good	3-14	Thickened	150-92	145-85	..	..	.....	.....	..	..	Arteriosclerosis; diabetes	Not disturbed	14
2611	F	C	42	Compensation good	2-9	Thickened	195-110	120-90	..	..	.....	.....	..	..	Arteriosclerosis	Not disturbed	28
3059	M	C	59	Compensation good	3-10	Thickened	185-105	155-75	..	..	.....	.....	..	..	Arteriosclerosis	Cerebral hemorrhage	11
15552	F	W	60	Compensation good	2-10	Thickened	235-130	210-110	60	..	Alb. + Casts 0	Alb. + Casts 0	29	..	Arteriosclerosis; nephritis, chronic	Not disturbed	23
34809	M	W	50	Compensation good	3-11	Thickened	190-110	130-100	..	..	Alb. 0 Casts 0	Alb. 0 Casts 0	..	..	Arteriosclerosis; nephritis, chronic	Not disturbed	132
36555	F	W	39	Compensation good	3-15	Not thickened	200-100	140-85	50	..	Alb. + Casts +	Alb. 0 Casts 0	38	..	Arteriosclerosis; nephritis, chronic; lues	Not disturbed	210
35399	F	C	51	Compensation good	4-10	Thickened	230-150	185-115	..	..	.....	.....	..	..	Arteriosclerosis	Not disturbed	14
35746	F	W	49	Compensation good	2-9	Thickened	200-85	148-70	..	..	.....	.....	..	..	Mitral insufficiency	Not disturbed	115
38863	M	W	46	Slight dyspnea	3-11	Thickened	188-105	177-92	..	..	.....	.....	..	..	Myocarditis, chronic	Not disturbed	150
36528	F	W	43	.....	....	Thickened	190-105	140-90	..	..	.....	.....	..	..	.....	Not disturbed	60

O.C.D. is outline of cardiac dulness; P.S.P. is phenolsulphonphthalein test; N.P.N. is nonprotein nitrogen. This table clearly shows that blood pressure can be definitely lowered through vasodilation without the slightest disturbance either in cardiac or renal compensation, but with what must prove to be actual conservation of the cardiac and renal compensation as also of the walls of the arterial tree.



TABLE 2.—VASOMOTOR RESPONSE RETAINED. BLOOD PRESSURE LOWERED BY VASODILATION. CARDIAC AND RENAL DECOMPENSATION IMPROVED

Case No.	Sex	Race	Age	Symptoms	O.C.D.	Vessels	Blood Pressure		P.S.P.		Urine		N.P.N.		Diagnosis	Result	Days Ob-served
							Entrance	Discharge	Ent.	Dis.	Entrance	Discharge	Ent.	Dis.			
2484	F	W	44	Dyspnea, edema	3-20	Thickened	230-115	155-85	45	50	Alb. Casts 0	Alb. Casts 0	..	..	Auricular fibrillation; nephritis, chronic	Compensation restored	28
3877	F	W	45	Dyspnea, edema	3-10	Thickened	222-114	156-86	..	..	Alb. Casts ++	Alb. Casts +	13	..	Myocarditis, chronic; nephritis, chronic	Much improved	26
2579	M	W	64	Dyspnea, edema	5-14	Thickened	165-110	115-75	15	58	Alb. Casts ++	Alb. Casts 0	46	..	Auricular fibrillation; nephritis, chronic	Much improved	36
4148	F	W	60	Dyspnea, edema	2-9	Thickened	183-95	133-83	50	..	Alb. Casts 0	Alb. Casts 0	35	35	Auricular fibrillation; nephritis, chronic	Much improved	14
2839	M	W	39	Dyspnea, edema	2-9	Thickened	160-100	90-50	42	44	Alb. Casts 0	Alb. Casts 0	26	..	Auricular fibrillation; nephritis, chronic	Much improved	22
4789	F	C	41	Dyspnea, edema	2-9	Thickened	230-175	185-135	7	20	Alb. Casts ++	Alb. Casts 0	44	..	Auricular fibrillation; nephritis, chronic	Much improved	24
2960	F	W	57	Dyspnea, edema	3-12	Not thickened	225-135	170-90	30	..	Alb. Casts 0	Alb. Casts 0	32	..	Auricular fibrillation; nephritis, chronic	Much improved	17
3016	F	W	63	Dyspnea, edema	2-9	Thickened	173-93	147-83	50	..	Alb. Casts ++	Alb. Casts 0	27	..	Auricular fibrillation; nephritis, chronic	Much improved	11
4113	M	W	62	Dyspnea, edema	7-14	Thickened	210-130	160-95	45	48	Alb. Casts ++	Alb. Casts 0	..	..	Auricular fibrillation; nephritis, chronic	Much improved	60
4722	F	W	60	Dyspnea, edema	3-11	Thickened	260-115	180-100	22	33	Alb. Casts ++	Alb. Casts 0	43	..	Myocarditis, chronic; diabetes	Much improved	35
3755	M	C	37	Dyspnea, edema	3-13	Thickened	162-83	133-75	33	57	Alb. Casts ++	Alb. Casts 0	46	31	Mitral regurgitation; lues; nephritis, chronic	Much improved	40
3762	F	W	65	Dyspnea, edema	2-11	Thickened	200-116	150-86	40	..	Alb. Casts ++	Alb. Casts 0	41	..	Myocarditis, chronic; nephritis, chronic	Much improved	14
2476	M	W	62	Dyspnea, edema	3-14	Not thickened	152-92	145-85	35	..	Alb. Casts ++	Alb. Casts 0	..	..	Diabetes; nephritis, chronic	Much improved	14
35746	F	W	49	Dyspnea, edema	2-10	Not thickened	200-85	148-70	30	..	Alb. Casts ++	Alb. Casts 0	20	..	Myocarditis, chronic; nephritis, chronic	Much improved	15
35399	F	C	51	Dyspnea, edema	2-9	Thickened	230-150	185-115	34	..	Alb. Casts ++	Alb. Casts 0	51	38	Myocarditis, chronic; nephritis, chronic	Much improved	103

In the cases in this table with the vasomotor response also still retained as in Table 1, but the cardiac and renal compensation both broken with the lowering, however, of the blood pressure through vasodilation, the strain on the struggling heart is greatly lessened so that the fatigued muscles of the organ are given the opportunity of regaining their tone with a resulting marked improvement in the cardiac decompensation, and of the renal decompensation secondary to the weakened heart.

Note the increase in the P.S.P., but the diminution in the N.P.N. as also in the amount of albumen and casts as denoted by the number of plus signs together with definite and in some cases marked improvement in the symptoms.

TABLE 3.—VASOMOTOR RESPONSE REFRACTORY. BLOOD PRESSURE IRREDUCIBLE. CARDIAC AND RENAL COMPENSATION MAINTAINED BY INTEGRITY OF CARDIAC MUSCLE

Case No.	Sex	Race	Age	Symptoms	O.C.D.	Vessels	Blood Pressure		P.S.P.		Urine		N.P.N.		Diagnosis	Result	Days Observed
							Entrance	Discharge	Ent.	Dis.	Entrance	Discharge	Ent.	Dis.			
2705	F	W	65	No decompensation	2-9	Thickened	133-103	223-93	53	48	Alb. 0 Casts 0	Alb. 0 Casts 0	33	..	Diabetes; nephritis, chronic	Compensation maintained	21
37320	M	C	46	No decompensation	2-9	Thickened	190-110	187-105	..	..	Alb. + Casts +	Alb. + Casts +	..	..	Nephritis, chronic	Compensation maintained	48
P	M	W	71	No decompensation	3-11	Thickened	176-120	213-113	..	..	Alb. + Casts +	Alb. + Casts +	..	..	Nephritis, chronic	Compensation maintained	8 yrs.
P	F	W	61	No decompensation	3-10	Thickened	175-80	186-105	..	..	Alb. 0 Casts 0	Alb. 0 Casts 0	..	..	Arteriosclerosis	Compensation maintained	1 yr.
P	M	W	65	No decompensation	3-11	Thickened	225-120	230-100	..	..	Alb. 0 Casts 0	Alb. 0 Casts 0	..	..	Arteriosclerosis	Compensation maintained	2 yrs.

In this group the hypertension is irreducible, but the heart is sufficiently strong to maintain the cardiac and renal compensation for a longer or shorter time at least, in spite of the increased strain thrown on it by the marked increase in blood pressure, and just so long as the heart thus remains compensated do these cases continue symptomless.

TABLE 4.—VASOMOTOR RESPONSE REFRACTORY. BLOOD PRESSURE RAISED THROUGH INCREASED TONE OF CARDIAC MUSCLE, WITH IMPROVEMENT IN CARDIAC AND RENAL DECOMPENSATION

Case No.	Sex	Race	Age	Symptoms	O.C.D.	Vessels	Blood Pressure		P.S.P.		Urine		N.P.N.		Diagnosis	Result	Days Observed
							Entrance	Discharge	Ent.	Dis.	Entrance	Discharge	Ent.	Dis.			
2589	M	W	57	Dyspnea, edema	8-19	Thickened; tortuous	145-85	183-100	15	49	Alb. ++ Casts ++	Alb. + Casts +	47	..	Auricular fibrillation; nephritis, chronic	Improved	30
2627	M	W	60	Dyspnea, edema	3-17	Thickened; tortuous	225-105	227-125	3	15	Alb. ++ Casts ++	Alb. + Casts +	63	58	Myocarditis, chronic; nephritis, chronic	Improved	30
2636	M	W	53	Dyspnea, edema	3-15	Thickened	205-148	213-123	19	29	Alb. ++ Casts ++	Alb. + Casts +	47	24	Myocarditis, chronic; nephritis, chronic	Improved	51
2945	F	W	40	Dyspnea, edema	4-15	Thickened; tortuous	168-130	188-138	18	37	Alb. ++ Casts ++	Alb. ++ Casts +	..	..	Myocarditis, chronic; nephritis, chronic	Improved	22
3808	M	W	55	Dyspnea, edema	3-10	Thickened; tortuous	160-120	194-100	35	..	Alb. + Casts +	Alb. 0 Casts 0	36	27	Myocarditis, chronic; nephritis, chronic	Improved	16

With the hypertension still irreducible a resulting break in cardiac and renal compensation has at last occurred, but the heart through rest or other treatment has so regained its tone as to raise the blood pressure up again to the point necessary for compensation, with a consequent relief in the symptoms, more or less permanent.  
 Note the increase in the P.S.P., the decrease in the albumen and casts. The hypertension, however, has not been conservative, but for a time only destructive and only necessary for compensation because of the loss of vasomotor response and compensation under such a strain cannot be for long maintained by the heart.

TABLE 5.—VASOMOTOR RESPONSE REFRACTORY. BLOOD PRESSURE LOWERED THROUGH IRREDEMIABLE CARDIAC DECOMPENSATION AND CONSEQUENT RENAL DECOMPENSATION

Case No.	Sex	Race	Age	Symptoms	O.C.D.	Vessels	Blood Pressure		P.S.P.		Urine		N.P.N.		Diagnosis	Result	Days Observed
							Entrance	Discharge	Ent.	Dis.	Entrance	Discharge	Ent.	Dis.			
2664	M	W	59	Dyspnea, edema	6-16	Thickened	232-112	185-140	12	2	Alb. +++ Casts +++	Alb. +++ Casts ++	63	100	Auricular fibrillation; nephritis, chronic	Death	18
2794	M	W	33	Dyspnea, vertigo	4-13	Thickened	212-140	160-97	9	0	Alb. ++ Casts ++	Alb. ++ Casts ++	97	200	Mitral insufficiency; nephritis, chronic	Death	60
2904	F	C	57	Dyspnea, edema	3-16	Thickened; tortuous	162-122	95-65	24	11	Alb. +++ Casts +++	Alb. +++ Casts ++	..	..	Myocarditis, chronic; nephritis, chronic	Death	55
2882	M	W	57	Dyspnea, edema	4-16	Thickened; tortuous	160-90	130-80	32	11	Alb. ++ Casts ++	Alb. ++ Casts ++	..	..	Myocarditis, chronic; nephritis, chronic	Not improved	85
2640	F	W	65	Dyspnea, palpitation	3-10	Thickened; calcareous	180-85	163-78	47	..	Alb. + Casts +	Alb. + Casts +	42	..	Myocarditis, chronic; nephritis, chronic	Not improved	15
2647	F	W	53	Dyspnea, edema	4-17	Thickened; calcareous	200-115	165-85	28	..	Alb. ++ Casts ++	Alb. ++ Casts ++	35	..	Auricular fibrillation; nephritis, chronic	Not improved	9
2748	M	W	54	Dyspnea, edema	4-15	Thickened	168-118	105-65	34	..	Alb. + Casts +	Alb. + Casts +	40	..	Mitral insufficiency; nephritis, chronic	Not improved	65
2957	F	W	64	No decompensation	3-15	Thickened	210-190	143-72	..	..	.....	.....	..	..	Diabetes	Not improved	28
2988	F	W	44	Dyspnea, edema	3-14	.....	222-118	205-130	46	..	Alb. ++ Casts ++	Alb. ++ Casts ++	19	..	Myocarditis, chronic; nephritis, chronic	Not improved	12
2997	M	W	62	Dyspnea, edema	2-13	Thickened; calcareous	153-100	140-90	16	..	Alb. ++ Casts ++	Alb. ++ Casts ++	44	..	Myocarditis, chronic; nephritis, chronic	Death	66
3822	M	W	54	Dyspnea, edema	4-16	Thickened; calcareous	170-75	143-60	Tr.	Tr.	Alb. ++ Casts ++	Alb. ++ Casts ++	29	46	Auricular fibrillation; nephritis, chronic	Death	15
3828	F	W	46	Dyspnea, edema	3-12	Thickened	240-162	212-143	47	40	Alb. ++ Casts ++	Alb. ++ Casts ++	47	45	Myocarditis, chronic; nephritis, chronic	Not improved	26
2589	M	W	57	Dyspnea, edema	7-19	Thickened	145-85	132-83	15	..	Alb. +++ Casts ++	Alb. +++ Casts ++	47	..	Auricular fibrillation; nephritis, chronic	Death	30
28137	M	W	54	Dyspnea, vertigo	4-17	Thickened	210-110	125-85	..	..	.....	.....	..	..	Myocarditis, chronic	Death	61

With the hypertension persistently irreducible this group of cases furnishes the sequence to the majority of those in Tables 3 and 4. The pumping force of the heart becomes permanently crippled with a progressive increase in all the symptoms of both cardiac and renal decompensation on to the fatal termination. For in this class of cases the reserve cardiac energy becomes exhausted and the organ is unable longer to respond to remedial agencies.

Note the definite lowering in blood pressure due not to vasodilation as in Tables 1 and 2, but to cardiac failure, differing, however, from the drop in blood pressure through vasodilation in being permanent. Observe also the decrease in the P.S.P. with the increase in the N.P.N. as also in the albumen and casts. Also the failure of improvement in any of these cases, while at the same time the appearance of fatalities, for the first time in any of these groups, and which exceed 50 per cent. It is these final hopeless results of hypertension cases as embraced in this table which should so strongly plead for early control of high blood pressure before the organic changes occur in blood vessels, heart and kidneys that ultimately result in such disaster as depicted in this table.



We feel as yet not justified in drawing any definite conclusions from our work, so that the following tentative impressions only are offered.

1. Hypertension is never conservative for either heart or kidneys, but always destructive sooner or later to these organs.

2. An effort should always be made to reduce it; if successful the walls of the arterial tree and the heart and kidney compensation will be observed and their decompensation improved or relieved. If unsuccessful no harm will have been done to either heart or kidneys or arteries.

3. Individuals at about middle life should report to their physician as they do to their dentist, so that hypertension may be detected and controlled before becoming refractory, and thereby preventing all the dire aftermath in heart and kidneys and blood vessels, tending toward a fatal termination.

4. Even after hypertension has become apparently refractory, it may yet prove controllable later when not at first and even if permanently uncontrollable; if heart compensation has yet not been disturbed much can be done to conserve cardiac compensation, and even after its failure it may be for a time at least restored.

In conclusion, we desire to express our grateful appreciation of the kindly interest of Drs. Dock and Robinson, who have made our study possible by placing at our disposal the rich clinical material of the wards and the out-patient department of the Barnes Hospital, and to Dr. Andrews, house physician, and the intern staff for valuable cooperation.

We wish to add again that this report is purely a preliminary one which we hope to be able to develop not only through more complete study of future cases along the lines herein sketched, but also through investigation of new avenues so far disclosed to us.

Humboldt Building.

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#### THE TREATMENT OF EPIDEMIC PNEUMONITIS AT THE MISSOURI STATE UNIVERSITY\*

DANIEL G. STINE, M.D.  
COLUMBIA, MO.

Since Sept. 26, 1918, we have had at the University of Missouri 1,020 cases of pneumonitis. About 400 of these were among soldiers sent to the university for special vocational training and formed a section of our S. A. T. C.

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\*Read at the meeting of the St. Louis Medical Society, Oct. 26, 1918.

The hospital facilities for the care of these students was a 30 bed student infirmary (Parker Hospital) and its nursing staff—13 pupils and 4 graduate nurses—and its medical and surgical staff. These were expanded to cover as many as 300 beds, that is Parker Hospital was enlarged to 50 beds and two army hospitals of 125 and 80 beds were established, a women's hospital of 25 beds was formed in one of the girls' dormitories, and a 20 bed convalescent hospital. The extra beds were furnished by the Army.

The nursing of the men students was done by the soldiers detailed from the S. A. T. C. under charge of members of our nurses' training school. Red Cross nurses' aids assisted in the care of our women students and second year medical students acted as interns.

The character of the disease was a severe inflammation of the respiratory tract. The average entering patients' temperature was 102 + and 30 per cent. developed demonstrable consolidations scattered over both lungs. Our mortality was fourteen, giving a percentage of 1.3.

*Etiology.*—Blood culture taken from all grades of pneumonitis (from cases of so-called influenza to severe pneumonia) showed in 80 per cent. a growth of a diplostreptococcus. The bacteriologic characteristics of this organism will be described later by Dr. F. A. Baldwin. The same organism has been found in pleuritic fluid and various abscesses in convalescing patients. This organism appears as early as the first day of fever.

*Morbid Anatomy.*—The disease starts as an inflammation of the mucous membrane of the nose and throat and quickly spreads down the respiratory tract to the bronchioles. The diseased condition may stop here (in mild cases) or may invade the alveolar tissue around the bronchioles giving the picture of bronchopneumonia; or whole lobules may be progressively consolidated (lobular pneumonia), or all the lobules of one or more lobes may be consolidated so that the gross section may resemble lobar pneumonia, but microscopical section will show that the consolidation has a typical lobular arrangement.

Necropsies showed, besides a very extensive bronchlobular pneumonia, a hemorrhagic gastro-enteritis, cloudy swelling of liver and kidneys, and a splenitis. The leukocyte count showed a diminished, normal, or slightly increased count throughout the whole disease. The clinical course is now familiar to every one. There is the picture of both more or less pneumonitis and a more or less severe septicemia. The latter causes some change in blood vessel walls that results often in hemorrhage from nose, lungs, gastro-intestinal tract or genito-urinary tract.



## Bulletin No. 1

## ROUTINE TREATMENT OF INFLUENZA

On entrance give

R Quinine sulph. ....gr. v  
 Pulv. Ipecac et Opil. ....gr. v  
 Every four hours.

If patient becomes nauseated discontinue above for eight hours and start anew, giving in addition

R Ess. Pepsinae  
 on cracked ice with each dose.

On the second morning give

R Ol. ricini

On appearance of pneumonia or if the patient's chart shows an increasing fever above 102 F., if patient shows evidence of severe toxemia (especially hemorrhage), or if there are any abnormalities of breath sounds or blood streaked sputum, camphor in oil, 36 grains (10 c.c.), should be started, one dose every eight hours until temperature drops to normal.

Keep careful record of rate of respiration. Watch ventilation to be sure that there is no draught. Open all windows from the top. Every time nurse or orderly enters room notice if too cool and report.

All patients with temperature of 100 F. are to be served in their room and not allowed out of bed until resident physician orders them up.

See that patients have plenty of water to drink. Urge water on the toxic patients.

## Bulletin No. 2

There is now organized a team to do blood transfusion under the charge of Mr. Hugh P. Muir. They can reach the patients within one hour after notification.

It will be the duty of the resident physician calling the team to provide as donor a person who has recovered from pneumonia of like bacterial etiology. If there are none in his wards he should confer with Dr. Dolley in reference to Army Hospital No. 2.

## Bulletin No. 3

## FOR RESIDENT PHYSICIANS AND NURSES

Each resident physician should visit and examine each patient each morning and afternoon. Examine or arrange for the examination of the chest of each new patient and see that a record of this examination is made on the patient's chart. All localized areas of râles, diminished breathing and bronchial breathing, if accompanied by temperature of 103 F. or over should be regarded as a beginning pneumonic consolidation in an entering patient, and the case reported to Dr. Stine.

Nurses should be on the alert for any unfavorable change in their patients, and see that a doctor is notified at once.

These changes are: any sudden rise in temperature in a patient that has been running a mild febrile course; complaining of pain in the chest, especially if accompanied by increasing pain when coughing or an inability to cough; any increase in the rate or difficulty of respiration; changing of the color of the face to a more dusky tone, dry lips, etc., that denote an increasing toxemia.

Remember that the fight is won or lost in the early hours of the pneumonia and that its early recognition is imperative. Also that a very large per cent. of your patients will develop pneumonia and that the outcome of this in many will depend on your alertness.

Dr. Stine will act as consultant to the resident physicians and all cases of pneumonia should be reported to him at the time of his visits.

*Treatment.*—Absolute rest in bed of all cases as even the mildest is a potential pneumonia. The wards were kept warm and patients protected from draughts. There was no attempt to control fever by hydrotherapeutic measures.

On entering the patient was given Dover's powder, 2½ to 5 grains, and quinin, 2½ to 5 grains, repeated every four hours. Medication by mouth was often discontinued on account of nausea. On the appearance of signs of consolidation, that is, areas of bronchial breathing and dullness, camphor, 36 grains, in sterile olive oil was given intramuscularly every eight hours in men and every ten hours in women. In the severe types of pneumonia this dose was given as often as every four hours for four doses and then every eight hours. Some patients received as much as 800 grains in seven days. Since Oct. 10, 1918, in the severer cases that did not respond to the camphor, a transfusion of citrated blood from convalescent patients has

been done. The results of this procedure were somewhat doubtful. Normal horse serum seemed to give a beneficial result in about the same percentage of cases.

The Robinson method of blood infusion as modified by Dr. Addison Gulick of the university was used. The modification consists of the addition of thermometer, moving inlet to base of bottle and shortening inlet tube. Also pressure indicator.

Forty-five c.c. of 3.8 per cent. sodium citrate (isotonic to blood) is placed in bottle; 200 c.c. of blood is added from donor.

In injecting blood one should proceed slowly, watching the indicator for signs of too much pressure. Dog experiments have shown us that as small an amount as 50 c.c. injected rapidly can kill a 30 pound dog.

Forty-five c.c. of sodium citrate would slightly increase the time it takes blood of patient to coagulate, as 120 c.c. injected intra-

venously into 30 pound dog and clotting time was increased two to three times (dog blood clots rapidly).

Sodium citrate action on clotting is probably due to suppression of the ionization of calcium, as calcium is a heart stimulant. Sodium citrate would theoretically act as a depressant (dog experiments do not bear this out).

Intravenous infusions of solutions of alkaline salts were without results. The results of the treatment of the infection with a vaccine made from killed diplostreptococci are as yet doubtful.

Bulletins were posted for the guidance of resident physicians and nurses and copies of them are presented herewith.

*Immunity.*—The disease does not bestow a lasting immunity on all individuals. Relapses are common and we are now seeing a number of reinfections. An attempt to immunize the student body with our vaccine will be carried out on the opening of our second semester.

#### CONCLUSIONS

The terms influenza and complicating pneumonia are misleading. The disease is a pneumonitis that is highly contagious. Our low mortality,  $1\frac{3}{10}$  per cent., we explain as resulting from the early recognition of the extension of the pneumonitis in the alveolar tissue of the lungs, keeping the temperature of our wards at about 75 degrees, and to the use of large doses of camphor in those cases where pneumonia was suspected.

Blood transfusions gave doubtful results, probably due to the very slight immunity possessed by the convalescent patient. Alkaline medication is useless except where a long sickness or stormy convalescence has occasioned considerable wasting. The bacterial invader causing the disease is a small diplostreptococcus. Vaccines made from this organism may immunize the healthy individual.

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#### SPECIAL CLASSES FOR CHILDREN WITH DEFECTIVE SIGHT: AN UNFULFILLED LOCAL NEED\*

JOHN GREEN, JR., M.D.  
ST. LOUIS

The daily routine of the practicing ophthalmologist may seem to some of his fellow practitioners rather a dull, not to say tedious, round of oft repeated activities. Of course it is not all so tedious and commonplace as it seems, and for one who really cares for his specialty there is always enough variety to incite his diagnostic and therapeutic acumen. The ordinary problems of any medical practitioner con-

front him, in addition to many questions which pertain strictly to his special sphere. Now and again he is brought face to face with a social problem, *e. g.*, with a child hopelessly blind. Often, indeed, the parent, prior to the consultation, has dimly realized the truth and comes not only for a confirmation of his fears but also in the hope that some means may be suggested to lighten the almost intolerable burden of blindness. In such a case the oculist has only to point to the opportunities for education and medical care afforded by the Missouri School for the Blind, and to urge with all the eloquence at his command that the stricken child be entered there at the earliest opportunity.

Probably few of you are aware that this splendid institution, founded and maintained by the state, ranks with the very best institutions of its kind in the country. About ten years ago the present beautiful group of buildings, admirably designed for the special needs of blind children, was erected on Magnolia Avenue, facing Tower Grove Park. Here, under the wise superintendence of Mr. S. M. Green, and the skilful professional attention of Dr. Joseph W. Charles and his co-workers, the little blind child has every chance to acquire a thorough education, while his physical wants and ailments are abundantly provided for. Only those who have been privileged to watch the gradual emergence of the shut-in soul from spiritual darkness to spiritual light through the kindly and highly specialized efforts of the School for the Blind can realize the immense good that this institution is doing.

The number of blind school children is, of course, very small in comparison with the total number of children in the schools. There is another much larger group of children who are not blind, neither have they good vision. Sometimes the visual defect is not discovered in infancy and early childhood. The child avoids obstacles, plays with its companions, and takes an interest in toys and picture books. He may have enough vision to struggle through several of the earlier grades, but sooner or later it is brought home to the parent or teacher that the child is suffering from an ocular handicap.

Let me briefly relate three cases which have recently come under my observation—cases which brought home to me this serious problem and left me helpless when I tried to cope with it.

CASE 1.—A little girl, aged 9, was found to have a great deal of difficulty in reading; she would hold the book close and at an angle. Nor could she tell what the teacher placed on the blackboard. One optician and two oculists had prescribed glasses. Apparently no explanation had been offered of the reason why glasses failed to relieve. A glance at the eyegrounds showed in the center of each macula retinochoroidal atrophic spots. What little vision this child had was excentric and hence not useful for any fine visual tasks.

\* Read before the St. Louis Medical Society, Nov. 23, 1918.



CASE 2.—A boy, aged 12, was brought because his eyes "rolled round" and because he had "white spots on his sight." After five years of schooling he was still in the second grade. The history indicated that he had suffered from ophthalmia neonatorum. He had the usual sequelae of a neglected case of this disease—an adherent leukoma covering the pupillary space in one eye, a nearly central corneal nebula in the other. There was marked nystagmus. R. V. 20/60. L. V. fingers at 2 feet. All possible combinations of glasses were tried without benefit.

CASE 3.—A little boy, aged 8, is a partial albino. He has the usual ocular characteristics of this anomaly—light blue irides, great deficiency in retinal pigmentation and nystagmus. Vision 20/60 either eye. Tinted glasses correcting his hyperopic astigmatism were helpful in the sunshine, but there was no improvement in vision.

What constitutes defective sight? No hard and fast line can be drawn between the sighted and semisighted on the one hand and the semisighted and the blind on the other. For purposes of classification, defective sight has been defined as "vision not more than one-third nor less than one-tenth with the best glasses obtainable." There are a variety of causes of poor vision in addition to the causes mentioned in the case reports, *e. g.*, congenital cataract, retinitis, optic atrophy, etc. Many children with high hyperopia and progressive myopia cannot be made to see well with their correcting lenses and should properly be included in this group.

Children suffering from ocular defects of this sort have, of course, always been enrolled in every large school system. Prior to the period of medical inspection, the reason for the backwardness of any given child did not always appear. All that the teacher and parent knew was that the youngster did not get along well. Even if the defect were discovered the teacher and parent were helpless. The former had no right to exclude such a child from classes and often tried hard to fit the child into the usual educational groove—a process which was no more successful than the attempt to fit a square block into a round hole. At the end of the term the discouraged teacher had no recourse but to demote the discouraged pupil. The following year the same weary and futile process was repeated. Of course, this sort of thing could not keep up indefinitely and the problem solved itself (if solution it can be called) by the child leaving the school long before the grammar school grades had been completed.

When systematic medical inspection began to be the rule in schools in the larger cities, more and more of these cases came to light and the problem began to assume definite shape in the minds of educators. It having been determined that these children could not be educated in the ordinary schools, it was thought that provision might be made for them in schools for the blind. It was assumed (erroneously, as experience

proved), that the partial sighted child was to all intents and purposes a blind child, and that the educational methods that had proved effective for the latter would prove equally effective for the former. This experiment was tried out, for example, at the Perkins Institution for the Blind in Boston. But it was foredoomed to failure. The child's vision may be seriously defective and yet he sees after a fashion. He is bound to rebel at any effort to fit him into any educational system designed for the sightless. In the education of the blind the lost sense of sight is replaced by the sense of touch, and to some extent by the senses of smell, hearing and taste. Many of us endeavor to accomplish by touch alone tasks that usually require the cooperation of eye and hand.

The beginner in knitting finds that sight and hand must be helped out by mental concentration (and sometimes by facial contortions). But with practice the mind is less and less concerned with the task and finally the fingers do the work with hardly a glance from the eyes. And so it is with one who has learned "touch typewriting." But perhaps, after all, sight does prove an adjuvant to touch to a degree that is little suspected. It may seem to the experienced knitter or typist that she is wholly independent of vision, but, as a matter of fact, there occur moments of hesitation or uncertainty when the sense of touch is deemed inadequate to obviate an impending mistake and then a lightening glance will insure the correct completion of the task. The same irresistible tendency to supplement by sight the tasks supposedly carried on by touch alone is shown by the partial sighted when the attempt is made to instruct them by methods suitable for the wholly blind. For instance, it has been found impractical to teach the raised types of the blind to partial sighted children: the laborious process of determining the individual letter by the sense of touch is soon abandoned and these children are found straining their eyes in an effort to see the arrangement of the raised dots. Thus is promoted the very thing which should be avoided, namely, overstrain of the eyes.

One of the disadvantages under which the totally blind child labors is that as a rule he has received his education in a special school away from contact and association with his sighted fellows. This drawback has been recognized and in some places, New York for instance, many blind children are educated in the schools for the sighted. New York's experience has been so favorable that other communities have followed suit.

Classes for semisighted children should always be conducted in the regular school buildings, as much of the instruction can be given in the regular class rooms. During recess the

semisighted children are encouraged to commingle with their full sighted companions and are allowed to indulge in games and play of the less vigorous sort. Thus there is every opportunity for contact with the normal sighted and undesirable segregation is avoided.

I am indebted to Miss Ida E. Ridgeway, supervisor of Work for Children, Massachusetts Commission for the Blind, for the following statement concerning schools for the semisighted in this country and abroad:

"In 1905 Germany established the first special class for this type of child. About two years later England also established classes known as 'The Classes for Myopes.' The first class in the United States was opened in Boston, April, 1913, and still continues its usefulness in the annex of the Abby May School in Roxbury. Soon after this Ohio established several sight saving classes. I believe they now have eight. In November, 1915, New York City segregated a group of children who were being taught in the public school classes for the blind, this experiment justifying the establishment of eleven such classes at the present time, eight in Manhattan and three in Brooklyn. A class of this sort is about ready to be opened in Rochester, N. Y.

"In Massachusetts we have nine classes, four under the Public School Board of Boston, two in New Bedford, one in Worcester, one in Cambridge and one in Lynn. These classes should combine the most approved methods of pedagogy with every effort to eliminate eye strain. Much depends on the resourcefulness and the spirit of the teacher, as she must be able to adjust her methods of teaching to the individual need of each child under her care. The school room should be particularly well lighted without direct sunlight, the desks should be portable, so that the children can shift them to avoid too strong a light which might cause discomfort. There should be ample blackboard space, as these children are encouraged to do their written exercises very largely on the blackboard. The paper used in ordinary grades, that is, white paper ruled in blue lines, is always eliminated and in its place a large sheet of dull paper is substituted. Instead of using pen and ink, the children are encouraged to use a soft, large lead pencil similar to those used in kindergarten classes or by carpenters.

"Through the experience of practically every one who has been interested and really knows the work demanded of a teacher caring for a group of these children, it is stated that ten children should be considered a proper unit for one teacher to handle. Boston has increased this number to twelve, and in New Bedford, where no child is included in this class who is doing work beyond the fifth grade, the teacher is handling twenty-two. This, how-

ever, would not be possible if her class included the higher grades.

"Special attention is given to the handiwork of these children. Typewriting is considered advantageous to all children in the upper grades.

Children who have been repeaters and a few who have been considered mentally backward have been able to do well in these classes. Although a group of ten or twelve materially increases the per capita cost of the children in this group, if, in the long run, it eliminates repeaters and removes the child who is hindering his class through demanding more time from his teacher than he is really entitled to in the ordinary group, such a class would surely be justified financially. On the other hand, the economic aspect of this class from the view of sight saving alone is a big item to be considered.

"By reaching the child of school age (up to seventeen years) much can be done toward checking certain eye conditions and diseases which, if neglected, might result in great loss of eye sight or even blindness in adult life. As illustration, a child in one of our sight saving classes has high myopia and appeared to be nearly blind when we first discovered her. With corrective glasses her vision is improved to about one-third of normal and although the trouble is of a progressive nature, her vision has remained about the same for two years. The father is blind—cause, separation of the retina from neglected myopia. He had not obtained medical advice until his eyesight—all but a dim perception of light and shadow—had gone. We believe his child has been saved from a similar fate largely through the advantages of a sight saving class."

A brief description of one of the Cleveland classes will indicate the care that is taken to safeguard the remnant of vision that the pupil may possess. The school room has abundant light but glare is eliminated by calcimining the walls in a neutral tone and finishing the desks and woodwork in a mat surface. Each pupil has a blackboard attached to his desk.

The work is oral, written and manual. Oral arithmetic, history, geography and language are taught in the regular class rooms. Written arithmetic and spelling are done on the pupil's blackboard. Textbooks are printed on heavy yellowish paper in thirty-six point clear faced type. Touch typewriting is taught. In the manual training classes the work is carried on as far as possible without the use of the eyes. The girls receive lessons in cooking and serving, and sewing is taught according to the methods used in teaching the blind.

Cleveland employs a school oculist and only those recommended by him can be admitted to the class. The teacher in charge receives definite advice from the eye specialist regarding the amount each child may be permitted to use



his eyes. Reexamination at stated intervals determines whether the child is holding his own or not. Progressive decrease in vision causes transferral to classes for the blind. This provision for examination and reexamination of the eyes has been recognized as vitally important, not only by oculists but also by educators. Superintendent Dyer of Boston believes that such classes should not be established unless at the same time there are provided ophthalmologists to make periodical expert examinations of the children's eyes in order that the kind of training may be so adapted to the individual child as to improve rather than to injure the fraction of vision he may possess.

What percentage of school children have sight so defective that they cannot be educated in ordinary schools? This question cannot be accurately answered for St. Louis, as no general survey of the ocular status of our school children has ever been made. In 1916 a careful study conducted by the Massachusetts Commission for the Blind led to some definite conclusions. In eleven cities and towns the vision of 26,164 pupils was taken. Of this number 4.1 per cent. had vision of 20/40 or less, 2.5 per cent. were neither wearing glasses nor had been examined by experts. Of the two latter classes 0.28 per cent were recommended by specialists for transfer to sight saving classes. I quote from the tenth report, Massachusetts Commission for the Blind: "On the whole our results in the towns which we know most thoroughly this year tend to confirm our last year's statement based on a study of cities that it is probably safe to say that not merely 0.12 per cent. but as many as 0.4 per cent. of the whole school population of the state require teaching in sight saving classes. Another investigation of 40,259 school children in three Massachusetts cities showed that 840 possessed vision of 20/50 or less. An expert investigation of 456 children with defective sight (including those helpable by glasses) led to the conclusion that 68 (14.8 per cent.) should be in special sight saving classes. Applying these figures to St. Louis where the school enrollment is about 80,000, we may assume that not less than 100 and not more than 320 of our school children are going without an education because of the failure of the school board to provide for their special needs. My own impression, based on the number of children with irremediably defective sight whom I encounter yearly in private and dispensary practice is that not less than 300 children in St. Louis require this type of education.

"The semisighted child is discouraged with always being behind its fellow students and develops a consequent carelessness, shiftlessness and lack of confidence. Later his lack of the fundamentals of education and the shiftless

habit acquired in a desultory school course must inevitably handicap his industrial life." This statement from a report of the Massachusetts Commission for the Blind coincides with my own recent experience. As a member of a medical advisory board I have had occasion to examine a large number of young men with disqualifying ocular defects, high hyperopes and myopes, sufferers from corneal and retinal disease, etc., and I have been struck with the large number of these men engaged in less remunerative occupations. Almost always there is the same tale—early abandonment of school because the work could not be done.

Not very rarely the child with defective vision is also mentally inadequate. The question then naturally arises, is or is not the mental deficiency dependent on the visual defect. The affirmative thesis has been maintained by some ophthalmologists. I am old fashioned enough to agree with Guy C. Fernald who says, "The relationship of mental and visual defectiveness is not one of cause and effect, generally, but one of association. A marked visual defect is a contributory cause in the inefficiency of an individual, but it is not *per se* a cause of mental enfeeblement, since feeble-mindedness is a congenital defect or is traceable almost without exception to some other accident. While the development of the young is retarded in some degrees at least by any defect in any of the special senses, yet visual defectiveness is not a direct cause of mental defectiveness."

In the handling of special problems connected with the education of children variously handicapped, the St. Louis School Board has displayed an attitude commendably progressive. Last year there were a dozen schools for mental defectives with a total enrollment of 471. There were fifty-one ungraded classes for borderline, backward and restoration types of pupils, with a total enrollment of 3,111. The Gallaudet School is for deaf or nearly deaf children. Two open air schools are doing wonders in the upbuilding of anemic and pretubercular children. There are also special classes for truant and unruly boys. But so far there is no provision for the semisighted and the crippled. The school board says, in effect, to these defectives, "You have chosen your handicap carelessly. If you had some other defect, I could educate you."

The vast program for the rehabilitation of our soldiers crippled by wounds received in defense of our country shows the people's will to reestablish in economic independence those who have been maimed. Shall the child handicapped by defective sight not be given that specialized education which will in later years fit him to become a happy and productive citizen?

Metropolitan Building.



## DISCUSSION

DR. J. W. CHARLES: Dr. Green's argument seems to be well based. In addition to the many children who have congenitally defective vision there are many who suffer from disease which may require several years of care before its progress is stayed.

During the formative period of such a child the influences of home or hospital do not conduce to the development either of mind or character. Idleness in childhood and the mistaken sympathy of parents are apt to result in the very worst form of citizen, one who demands everything from the world without giving anything in return. He has been led to believe that the world owes him something on account of his misfortune, which is, indeed, true, though not in the sense in which he conceives the idea. A self-respecting world owes him the opportunity to develop and to produce, thereby giving him a chance for happiness. Education of children with defective sight can only be insured by some such plan as that suggested by Dr. Green. The progressiveness of the St. Louis Board of Education augurs well for the future care of these unfortunates.

I recently sent home a bright boy of eighteen, who had been badly neglected for eight years. I had treated him for five months in the hospital. No glass improves his vision of 23/75. He could never have kept up with any of the classes in our schools for the seeing nor would he ever be able to adapt himself to the necessary environment of a school for the blind. How can a boy who can see at all make himself use his fingers in reading?

It should be noted that pupils in our school for the blind, who have learned Braille and have made some progress in the curriculum, and who then have recovered some vision are at a great advantage over the other pupils; they no longer have the incentive of competition, their work deteriorates, they are soon unfitted for competition of life after they leave school.

If education and development of character are necessary for good citizenship (and is that not the *raison d'être* of our public school system?), is it not necessary to pay attention to the formative period of a goodly percentage of our youth, who, whether they finally recover their vision or not, are entitled to a chance to become useful citizens? One, two or ten years of idleness while old trachoma with recurrent ulcers is being treated may ruin a character for life, although sight is finally recovered to a working degree. Some of the children who are blind are treated by us in the school for the blind and recover some vision. Some children are denied treatment and education by foolish parents who are horrified by the idea that their children have to go to a school for the blind.

For eight years a member of the board of the school for the blind, the family physician and Mr. Green, the superintendent, have endeavored to persuade the parents of a blind child now thirteen years old that she would be far more happy learning something in the school than remaining at home with nothing to do and no hope for the future. The mother could not bear the thought of a separation, however, nor of turning over her child to the care of strangers who could not love her as she thought she did; and especially she opposed placing her child in a school for the blind. Her family physician, one of those noble men who treat souls as well as bodies, finally persuaded them to allow him to pay the fare of the mother and daughter to St. Louis for treatment of the child's eyes at the Missouri Baptist Sanitarium in the hope that I might be able to show the mother some good results of treatment during the three weeks preceding the opening of the fall semester and then convince her that the best place to continue treatment was at the Missouri School for the Blind. I treated the girl, who was very tractable and bright and sweet,

every day for three weeks. The mother and daughter received free board at the hospital during that time, and just before school began I told the mother that since she could see for herself how much better vision the child had she ought to place her where she would have the best chance for future vision—"with other children, some of whom could see a little and others who could not see at all." I told her that it would be a matter of several years to accomplish all that was necessary in the treatment and in the meantime she could be learning something. The idea appealed to the child who begged to be allowed to remain, but when the mother found that it was the school for the blind she preferred to take her daughter back home even after we tried to arrange some way by which she might become an employee about the place until she was satisfied that her daughter was in good hands.

The half-blind child cannot be cared for in the school for the blind and must be cared for, if at all, by some such plan as outlined by Dr. Green.

### THE CRIPPLED CHILD: ITS PHYSICAL AND EDUCATIONAL NEEDS\*

ALEXANDER E. HORWITZ, M.D.  
ST. LOUIS

The needs of the crippled child, that is, the child with an active crippling disease, are not entirely met when efficient physical treatment is accorded it. For the purpose of our paper we should classify these children as follows: (a) Those with an active lesion, acute or chronic, leading to disability; (b) those completely disabled; (c) the convalescent; (d) the crippled with healed lesions.

From a physical standpoint we can safely assume that the majority of our crippled children receive efficient treatment. That this treatment is to a large extent not ideal must also be admitted. The painfully few institutions where the crippled child is cared for have their capacity filled. To our sorrow must we admit that a city of the fourth rank should make no special provision for the care of the crippled child. It is here left to private or semiprivate agencies.

The provisions for their care at our city institutions are deficient. Not to attract undue criticism on myself, I will state that the immediate surgical needs are met as well here as at any special hospital, but the deficiency arises in the after-care.

In all orthopedic cases we know that the special care during the protracted convalescence is what determines its future physical state and status. Orthopedic cases are unlike ordinary surgical cases, and the general surgeon makes a grave mistake in thinking that a beautiful operation performed is the most important feature.

The after-care is here by far the more important. Our splendid City Hospital does not

\* Read before the St. Louis Medical Society, Nov. 23, 1918.

offer this after-care. The St. Louis Children's Hospital offers it to a degree only, a degree limited to its capacity.

As a plea for the establishment of a special municipal hospital for orthopedic cases I claim: (1) the insufficiency of accommodations at the City Hospital; (2) the need of a convalescent hospital; (3) special treatment required by orthopedic cases which cannot be given at a general hospital; (4) open air treatment is an impossibility at the City Hospital; (5) that the number of orthopedic cases under treatment annually at the City Hospital shows the need of such an institution; (6) the necessity of following up orthopedic cases after they leave a general hospital is here an impossibility; (7) the insufficiency of such after-care at our City Dispensary; (8) these and other important benefits are to be derived from a special hospital.

At all of our institutions for the physical care of the crippled child, here and elsewhere, we seem to forget that the child is likewise entitled to educational training. The child passing through the stage of acute disease and convalescence need not necessarily be deprived of an education. Its mind is alert, frequently more so than that of the physically normal child. It needs training. That the child disabled and on its back for a year or years, should be further handicapped in its struggle for existence by lack of mental training is inexcusable.

No census of the crippled child in St. Louis has been made in recent years. The last made by the school board in 1915 showed a total of 236 children unable to reach school because of their infirmities. No further data were secured. At a previous census, 1913, the following information was obtained: 1. One hundred and eight children entirely unable to attend school but who could attend if conveyed. 2. Two hundred and sixty crippled children who attend school. 3. Seventy-three nonresident children in hospitals. Total, 441.

Comparing these reports one fact stands out very prominently. In 1913, 108 children could not reach school because of physical infirmity. In 1915, two years later, this number had increased to 236, an increase of over 100 per cent. At this rate of increase the number to date will exceed 700.

That a population of 700 should be entirely neglected, as far as school needs are concerned, is beyond reason.

My plea before you this evening is to give the crippled child that which is due him, not to impose further hardships but to make its life, already a burden, easier and more agreeable. A child's mentality as we recognize, is to be moulded in its earlier years. Deprive him of his natural channels for thought and expression and morbidity will result. The stage

of intense suffering in this class of children is brief, early yielding under proper treatment to the stage of convalescence. Physical infirmity and disability, though complete at this stage, leaves a mind clear for perception and thought. These should be directed toward their proper channels.

We no longer look on a cripple as cursed of God. It is the product of our own creation, the product of environment. Why heap insult on injury and injury on insult.

The Spartan method has been discarded, although that method was more humane than our modern method. We pride ourselves on our national intelligence yet we are rearing a race of inefficients. Give the child his due.

The crippled child classified as above (a, b, c, d) can receive educational training. Surgical treatment should be accompanied by educational training. One need not exclude the other. Our school board is willing and desirous to cooperate. I would divide these children into groups as follows:

1. Those with active disease who cannot properly be transported to school.
2. Those with active disease who can be thus transported.
3. Those who could travel unattended, were proper provision at school made for their comfort.
4. Strictly hospital cases.

Under these discussions we will naturally omit those children who are enabled to obtain proper private instruction while under treatment. For the others, the greater proportion, we will advise as follows:

A. For Class 1, the establishment of a hospital school where the physical and mental can be cared for simultaneously.

B. For Classes 2 and 3, the establishment of a special school by the school board.

C. To provide means of transportation to and from school.

D. Awaiting the establishment of a hospital school, teachers should be provided by the school board to instruct children at their homes.

E. To provide special seats for children wearing apparatus to enable them to keep their minds with comfort on their studies.

A closer cooperation should exist between our hospitals and clinics and our school board. Our school board is sympathetic, and if the need is properly presented, action will be taken. It is estimated that Missouri possesses 2,500 crippled children of school age. St. Louis has at least 25 per cent. of this number. This fairly agrees with my earlier estimate of 700. I believe all these figures are much below the actual number. The number of children treated at the City Hospital averages 100 annually. Were



an actual census taken a sufficient number would be found to establish both a municipal hospital school and a special public school for the crippled child.

The material is present, the need is great, the educational authorities are sympathetic. Will not the civil authorities act? The initiative rests with the organized medical profession. Let us take the lead. The result will be more than gratifying.

University Club Building.

#### DISCUSSION

DR. PHIL HOFFMAN: I feel that I owe this audience an apology for my name appearing on the program to participate in this discussion, as I am not well prepared to do so. A number of weeks ago, when this program was scheduled to appear, I was quite sick and knew that I would be confined to the house for several weeks and that it would be impossible for me to come, and I did not make preparation. Consequently, I was somewhat embarrassed when, two days ago, I learned that the program had been postponed until this evening and that I was expected to participate in the discussion of the papers. I hastily made a few notes for what will be a very incomplete discussion, directed to only one part of the subject, the education of the crippled child in the public school.

It is becoming more and more recognized that it is the duty of the state or community to supply special educational provisions for crippled children. These cannot be fully provided in the classes attended by normal children.

Special classes, special equipment, specially trained instructors, and omnibusses or other special means of transportation to and from these classes, and attendants to help the children to and from the busses should be provided; and this is done in a number of our American cities.

The school rooms should be on the ground floor, but where an ascent is necessary there should be special inclines or stairways with broad, low treads and handrails. Lavatories should be conveniently situated. Adjustable seats and desks are necessary to provide approximately comfortable seating for the handicapped pupils.

Lunches should be provided at noon to make an additional trip home unnecessary. The instruction should be more individual than is given in the classes for normal pupils and the amount of work should be adapted to the physical possibilities of the pupil. Provision should be made for individual pupils to have short periods of recumbency during school hours, when the need of rest is indicated.

To save the children trips to dispensaries after school hours, or possibly loss of time from school during hours, a physician should make regular calls to dress discharging sinuses, adjust braces and render other simple medical services. Several cities have surgical dressing rooms attached to these schools for this purpose.

In the field of education for cripples St. Louis is years behind other cities of equal prominence. I am not acquainted with the more recent developments in this field, but three years ago, while visiting in the East I took occasion to inquire about what was being done in other cities.

In New York, for instance, where the work is most extensive, there were at that time being conducted forty-nine public school classes for crippled children, limited to a maximum enrollment of twenty to each class. The total number of children enrolled was 868. Twenty-eight omnibusses with attendants were

in service to carry these children to and from the classes. Most of these forty-nine classes were being conducted in special rooms of regular grade school buildings, distributed throughout the various districts of Manhattan, Brooklyn and Bronx.

One of the New York schools of special interest in this connection is the Crippled Children's East Side Free School, situated in the crowded poor quarter of the city; which had then an attendance of about 200 children.

In this school both grade teaching and industrial training are supplied. The children attending are considered as patients as well as pupils, and the building has been designed with a view to their physical as well as educational care.

In addition to the necessary school rooms, the building is provided with elevators, a roof playground, a large dining room, rest rooms, bath rooms and treatment rooms.

Free lunches are provided daily and baths are given at stated times. There is a visiting medical staff. An orthopedic surgeon, assistant and nurse adjust braces, apply plaster of Paris splints, dress discharging sinuses and give such other treatment as is usual at a clinic for outpatients.

The educational activities are controlled by the board of education, which furnishes the necessary teachers and equipment, and classes this institution as one of its public schools.

The building is owned by an association financed by private contributions. The board of education pays a rental for the classrooms. The association finances the sociologic, medical and general activities.

In the short time at my disposal, I have not had any means of finding out how much this work has been extended in New York City since these observations were made, three years ago. I do not doubt that there has been considerable extension since then, as the special system at that time was firmly established and had grown to what it was from a small beginning.

This program may be too elaborate for the present financial possibilities or physical needs of St. Louis, but if other cities, some of them of smaller population than St. Louis, can provide special facilities for the education of their crippled children, there is no reason why St. Louis should not at least make a start, if it be only to supply adjustable seats and desks for individual pupils, making it possible for them to be seated with some degree of comfort in the regular classrooms, and making possible the attendance of some children who now are deprived of the benefits of the public schools. This would be a very small beginning, but let us hope that St. Louis will do more than this, that a thorough survey of local conditions will be made and that, based on such a survey, she will soon embrace in her public school system all that seems justified of the measures that have been found of value in the education of the cripple.

#### SURGICAL ASPECTS OF PELVIC VERSUS ABDOMINAL DELIVERY\*

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The function of delivery produces many anatomical disarrangements in which surgical repair is necessary to restoration of function, and is the cause of many deaths that surgical aid could have prevented. The annual deaths in

\* Read at the Sixty-First Annual Meeting, Missouri State Medical Association, Jefferson City, May 7, 1918.

the United States from child bearing is put by DeLee (*Principles and Practice of Obstetrics*) at 20,000, in spite of the tendency of the bad cases to gravitate into specially competent hands, and invalidism due to deliveries is set at 50 per cent. Both avoidance and repair of these conditions call for surgical aid.

Transabdominal deliveries are increasingly popular as a resource for rapid delivery and in cases where pelvic delivery promises to be difficult or to involve the loss of the child. As there is much just criticism, one partaking in this work should consider the dangers and complications incident to this procedure and balance them against those of pelvic delivery. The indications for operative delivery should be judged by an obstetrician, and if decided upon should be done in a well equipped hospital by a surgeon. A skilled person should have charge of the resuscitation of the infant. To be justified in passing on the indicatings the operator should be able to qualify in experience with and knowledge of obstetrics. To be justified in making the section the accoucher should equally qualify in the practice of abdominal technic and aftercare. Division of responsibility gives the best results.

The mere accomplishment of the delivery without the death of the mother or child is not all of the problem. Besides this one must consider their future health and usefulness. It is of no avail to deliver a too large child through a too small birth canal only to have him prove a paralytic, epileptic or imbecile. Pelvic deliveries sometimes produce these as well as numerous other injuries to the child. Considered from this standpoint its death is preferable, and indeed frequently occurs. These effects may happen without the intervention of art, but are more frequent if the delivery is instrumental. The mother suffers in proportion. Especially is this true if the labor must be terminated before dilatation and engagement are complete. High forceps on a floating head are especially likely to produce injury. Both forceps and version have an increased fetal mortality. The mother always receives some injuries. The pelvic joints or ligaments may be ruptured or strained. The uterine supports may be stretched or torn, the cervix is frequently torn, the uterus itself may be ruptured, the bladder may be ruptured or displaced or torn from its bony anchorages, the rectum may be torn in addition to the rupture of the perineum or it may herniate into the area of the perineal tear producing rectocele. Lesser tears and separations of the muscular fibers of the levator ani and the sphincter vaginae muscles are almost universal. This carries with it the rupture of the segments of the trigone with

cystocele and rectocele formation. It may or may not include the parting the mucous membrane with the formation of the classical tear of a part thereof. These effects persist in after years and furnish the basis for many surgical operations designed to lessen the invalidism which is justly attributed to this cause. I cannot share either the optimism or the pessimism of Dr. Richard Cabot in his recent book (*Langman's Handbook of Medicine*), in which he says optimistically that he does not think that prolapse of the uterus, bladder and rectum from birth injuries are very serious, also pessimistically and in contradiction of himself that he does not know personally of any person who has been benefited by operation. He knows of nothing more disappointing than to have one of these unfortunate women persuaded to be operated on only to find her last condition as bad as the first. This is a terrible indictment of the surgical work in his neighborhood. Due principally to the pioneer work of Dr. Howard Hill on the pelvic supports and the perineum, we have had no such experience. I believe, on the other hand, that these injuries are very important and have a definite anatomical, nutritional, and nervous effect. One likes to do these repairs because the results are among the best. However, a more satisfactory repair can be made of a ventral hernia following an abdominal section than of a cystocele or hernia of the bladder caused by rupture of the anterior segment of the trigone. Almost equally bad are the complete tears through the sphincter ani. Ephesiectomy should be used oftener as a prophylactic. Shock, hemorrhage and infection are dangers common both to pelvic and abdominal manipulations.

These factors should be weighed in cases where the choice is optional. In some cases the spacial disproportion is such that only by pubotomy or allied operations can the bony passages be made sufficiently large. There are three objections to these operations. First, the work is done blindly, in an area of free bleeding. (This may be serious.) Secondly, tears of the anterior trigonal segment always occur, and of the bladder may occur; thirdly, there is great stress on the sacroiliac joints and ligaments, even to the point of severe strain or rupture, and there may be a permanently crippled back. The remaining alternative is embryotomy. It has dangers of its own requiring special care to avoid, as puncture of the uterus, rupture of the bladder and laceration of the soft parts by projecting bones. The reduction in size may not be sufficient in some cases to save the mother from other injuries. It is a sufficiently gruesome proceeding on the dead child, nevertheless it should, if permitted, be done on



the living child that is not viable if the mother's interests demand it. However, if the child is viable one does not feel justified in this proceeding. It seems better, if the mother consents, even to sacrifice the uterus, if necessary to avoid danger of infection. The ability of the operator, the means at hand, the religious views, the stage of exhaustion, the relative importance of this child in the family life, all these should be considered. Certainly the strong desire of the mother for the preservation of the given child and her willingness to take the risk should weigh heavily in favor of abdominal delivery, especially if previous children have been lost.

The Porro operation has a definite usefulness in cases that have been examined by doubtful hands, or where pelvic manipulation designed to right matters has failed, yet it is desired to save the still viable child. Local anesthesia is useful in some cases. Cesarean section is not mechanically formidable nor is it especially productive of shock. Shock is to be attributed to the accompanying conditions or to technical errors rather than to the method per se. The operation is necessary in some cases that are not naturally strong, or that have arrived at term in a depleted condition, or that have exhausted strength by previous efforts, or that have lost blood from a placenta praevia. When all is said it produces less shock in many cases than any method available. Two technical errors should be avoided. First, is the exposure and handling of the bowels and the spilling of the blood and liquor amnii into the abdomen. Second, is the unnecessary loss of blood, not only in the immediate performance of the operation, but in the leakage from the suture line of the uterus. Secondary rupture of the uterus is a serious accident that may occur during the postoperative period or at a subsequent pregnancy. Therefore, good muscular apposition by at least three rows of sutures and careful rolling in of the peritoneal edges are worthy of the time and care required. Some interrupted sutures are advisable. I regard the Webster technic of opening both rectus sheaths at the outset and the throwing of the two muscles together in the final closure as of great value in the prevention of hernia. The child should always be grasped by the feet and extracted by the regular series of maneuvers as in ordinary breech delivery. The least force is thus required and the child is extracted through a smaller hole in the uterus. Much time can be wasted in tugging on the arm. As the assistant can appose the abdominal walls to the uterus by lateral and downward pressure and thus prevent spilling of fluids into the abdomen it is not necessary to deliver the uterus from

the abdomen before the delivery of the child. He can also prevent the later spilling of fluids by following the child out of the uterus with his hand, at the same time inserting a bath towel into the abdomen between the uterus and the intestines. The same movement together with the upward tug of the child throws the uterus upward and forward over the pubic arch. This makes the broad ligament available for pressure and constriction either by the fingers of the assistants or by a loop of rubber tubing. Pituitrin or ergot may be injected hypodermically just as the uterus is being emptied or just before.

Extraperitoneal methods are sometimes valuable. In one case in which I attempted the Hill method we failed of proper satisfaction by reason of lack of complete understanding of its details. In a case in which there was slow hemorrhage from the stitch holes in the uterus we had success by the use of omental plugs tied onto the suture line. In the cases in which the classical technic was smoothly carried out there was not noticeably more reaction than in the usual postoperative appendix case.

The article of Dr. Newall (*Jour. A. M. A.*, February, 1918) is a direct challenge to all operators in small cities and especially those with a small series of cases to report results. He made a private inquiry into the facts in four cities near Boston of less than 40,000 population with the following startling result. He found series A, 100 per cent. maternal mortality; series B, 60 to 70 per cent.; series C, 100 per cent.; series D, 10 to 20 per cent. in all cases, or 50 per cent. in eclampsia cases. In the face of this challenge it seems that one should report his cases and the indications for performance.

Two conditions in the progress of labor call for mechanical deliveries. One is the existence of spacial disproportion between the child and the birth canal; second, is the attainment of some condition calling for a rapid delivery regardless of the stage of pregnancy or the state of preparedness of the passages. This last indication may be in the interests of the mother or the child or both. The first and second indications may coexist.

Preventive treatment is important and may be able to prevent the occurrence of eclampsia and other conditions calling for rapid delivery. Spacial disproportions are in a measure predictable. We may know the size and shape of the bony pelvis and the elasticity of the soft parts or the existence of obstructing tumors by measurements and examinations. The prenatal measurements tend to indicate the length and weight of the child. After listening to the recent papers of Drs. Hamilton and Van Eman at the Jackson County Medical Society I am convinced that I have not previously had suffi-

cient confidence in the measurements of the fetus as indicating the size and weight of the child. For this reason we have used the test of labor in every case in which the disproportion was not obvious. The production of premature labor in anticipation of later disproportion arising seems very rational in the light of their results. This narrows the field for elective cesarean section as advised by Newall. Newall's contention that no real test of labor should be allowed seems too radical. Cases are seen wherein delivery occurs spontaneously, which, in the judgment of very good men, should have been difficult or impossible. It seems much easier to accept the dictum of a qualified obstetrician that premature induction of labor is advisable in a given case than that one should allow matters to progress until the disproportion is already accomplished and then elect to do a cesarean section without any test of labor. The test of labor should not be too lightly abandoned in spite of the attractive statistics that can be compiled by a surgeon doing only elective cesarean sections.

This fragmentary presentation of the surgical considerations should show that it is with no preconceived bias that the choice is made, but that both patients are entitled to weighing of the chances offered by both pelvic and abdominal methods. In answer to the challenge issued by Newall, I beg leave to report 25 abdominal deliveries covering a period of five years. One case arose during my own period in general practice. The remaining ones were referred through the kindness of the physicians of the neighborhood. There were one and two each from Drs. Brown, Cools, Keown, Mather, Messinger, Ragsdale, Robertson, Rowe, G. T. Twyman and Wood. The majority came from a home for delinquent girls attended by Dr. C. E. Nickson of Mt. Washington, Mo. Difficult labors occur more often among these girls than among the ordinary population. Infantile pelvis and rachitic and luetic changes are more common. We feel that the conjunction of their physical state and their delinquency is more than a coincidence.

In my series there were 25 living mothers and 21 living children. Twenty-four of the children were delivered alive. Twenty-two of them were at term, one of these died from previous loss of blood through the ruptured placenta praevia. Two children were only seven months and died in six and nine hours respectively. The remaining child was born dead. The mother refused to have embryotomy although assured that the baby was dead; this case was first in the hands of a physician who retired from the case after calling his successor

to take charge. She had been in labor over three days without engagement being accomplished.

The indications on which the sections were made were, dystocia from ventrosuspension, one; placenta praevia marginata, with failure of version, one; placenta praevia centralis, three; habitual loss of the child, one; face presentation with spacial disproportion, two; eclampsia four; threatened eclampsia with suppression of urine (operation under local anesthesia), one; ten month, 12 pound child, normal pelvis, with failure of the test of labor, one; relative contraction of the plevius, failure of the test of labor, ten; absolute traumatic contraction of the pelvis, one case. The indication of eclampsia is harder to defend than any, in the lack of general agreement on the subject, neither does the recovery of all the mothers in my series prove a case for the method, but in some instances it seems the necessary and least harmful way out. Treatment has usually already been tried to the limit.

In three cases the Porro type of operation was done. These gave as little reaction as any. In six cases stomach washings and enemas were necessary for postoperative ileus without peritonitis, all yielding to treatment; in one case there was acute dilatation of the stomach with peritonitis. Treatment was fortunately effective and the wound drained to recovery in three weeks. There were two cases of postoperative ventral hernia, with secondary operation. In both of them the uterine scar was inspected and was in first class condition and not depressed. One of these cases had a number of adhesions of the intestines to each other and to the omentum, fortunately none of them obstructive. In neither of these cases had the Webster technic of throwing the two rectus muscles together been used. There were seven cases showing suppuration in the wound or stitch abscess of some grade, some of these, of course, being included in the cases showing other complications. Fourteen of the cases recovered without complications. I feel that this is a very high incidence of postoperative troubles, due no doubt to avoidable errors in technic, as most of them occurred among the earlier cases.

405 Waldheim Building.

#### DISCUSSION

DR. H. E. PEARSE, Kansas City; The doctor rather emphasized, it seemed to me, the necessity of a test of labor. I think that is very proper—that a normal test of labor should be given, and every opportunity to complete the delivery of the child without the interference of surgery. At the same time it should be appreciated and accepted in the full light of what the doctor actually said. I think the majority of doctors whom I have seen in trouble with confinement cases have approached the study of the problem



by hastily and ill-prepared vaginal examination, and if we would listen to what Dr. Van Eman and Dr. Twyman have said, we would find—you gentlemen who have the care of this condition on your hands—that you must understand the relative size of that child compared to that pelvis and keep out of the vagina while you are making up your mind. The man who immediately removes his coat and makes a vaginal examination makes a mistake and starts a condition that in many cases is most grave. It seems to me that the keynote of the whole situation is that the test of labor should be given with care. When we consider the tremendous difference in mortality of the mothers, between the woman who has had two to four examinations of the pelvis and one who has had one, it behoves us to perfect ourselves in the measurement of the child and the pelvis through inspection and palpation and measurement of the abdomen and keep the fingers out of the vagina and pelvic canal until we know the condition surrounding it. I may be bitter; if I am, it is because I have seen so many unnecessary deaths resulting from this. It is no use to do a clean cesarean section on a woman who is already infected, but you have no means of telling whether she is infected except by the history eight to twenty-four hours prior. It is necessary that these cases be kept clean before they come to the surgeon.

In regard to the technic I think we all very much admire Dr. Twyman's explanation of the technic of the different operations. It requires the presence of a number of assistants who have no other business. The assistant who is to grasp the uterine arteries should do that and nothing else; the nurse who is to take the child from the man who delivers it should take it and get out of the way quickly. The only point on which I differ in the technic is the delivery of the uterus. I always deliver it before I pack away the contents of the abdominal cavity. That is because my technic has satisfied me, but it is older. Another thing is the incision. It should always be high, and then it should be done quickly and any splatter of blood should be avoided. The lines of repair of that uterus should be well laid out and adhered to and the wound closed.

DR. GEORGE C. MOSHER: I want to commend Dr. Twyman's paper from several points of view. First, as Dr. Pearse has said, all cases that are to become surgical obstetrics should first have the test of labor and preliminary to the test of labor all these cases should have the very simple external abdominal measurements, such as Dr. Van Eman described. When these are done as Dr. Twyman suggested, having determined that it is a case for Cæsarian section, I want to call attention to another suggestion and that is regarding the technic of delivery. In several cesarean sections I have seen recently, the surgeon, perhaps in a hurry and feeling anxious in regard to the welfare of the child, grasped it by an arm. Of course that was faulty technic, but if the delivery of the child is done as in ordinary version, the foot first grasped and delivered, then the arms released, the child is not subjected to traumatism and the mother can have delivery effected through a very much smaller opening in the uterus.

Another matter that has appealed to me more than anything else covering cesarean section, is the decrease in mortality. I do not doubt Dr. Newall's statistics, and if he finds within a radius of 40 miles of Boston that 100 cesareans are done with a mortality of 100 per cent., we must stop and take notice. These statistics are founded on facts, the fatality results from needless infection by vaginal examinations and futile attempts to use forceps and version before the

surgeon is called. I have had a recent experience with two surgeons, one in which a Porro cesarean section was done after the patient had been examined a number of times outside before she came into the hospital. This woman went home perfectly well, but of course she is sterile. Another case in the hands of another surgeon, I insisted on the same technic because the previous conditions were identical, but the surgeon said no—that this was a young woman in the child-bearing age and that we could not afford to interfere with her future posterity. She did not die, but she was in the hospital for three months with a general sepsis, had a discharge of pus from the wound in the abdomen and through the vagina for weeks, ran a high temperature, doubtless has all the pelvic viscera bound by adhesions and the chances are that she is just as sterile as the other woman.

You will all remember that a few years ago an eastern surgeon waxed very enthusiastic over the vaginal cesarean, saying this was the operation for the general practitioner, and could be done with little training and the minimum of assistants. But I want to call to your attention that it is a rather serious operation. Just as Dr. Pearse suggested, it is not an operation that can be approached except with a great deal of temerity. In the last year I have had four patients in the Kansas City General Hospital, each of whom has had one cesarean, and the subsequent child born via naturales. That should prove that every woman should have a test of labor in each instance unless the measurements show natural delivery an impossibility. The fact that a woman has once had a cesarean does not mean that she must always have a cesarean.

I appreciate Dr. Twyman's paper because I think he brought out several good practical points.

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THE annual report of the Surgeon-General, U. S. Army, for 1918 (including statistics for the calendar year 1917 and activities for the fiscal year ending June 30, 1918), has just been issued from the Government Printing Office. It contains a comparative study of the health of the Army, 1820-1917; an account of the health of the mobilization camps and of the Army by countries; a consideration (70 pages in extent) of the principal epidemics in the camps, and a discussion of fractures and operations. Nearly 200 pages are devoted to the special activities of the medical department—with the American Expeditionary Forces, and in the divisions of sanitation, hospitals, supplies, laboratories and infectious diseases, internal medicine, general surgery, orthopedics, head surgery, neurology and psychiatry, psychology, food and the Dental and Veterinary Corps. In addition to the usual tables of illness, discharge for disability and death, there are given tables of battle wounds and operations; of complications of various diseases and of case mortality. The text is illustrated by seventy-three charts. Altogether the report is a study of health and morbidity in an Army of over 1,500,000 men, for the most part yet in the period of training. It should be of interest to epidemiologists, vital statisticians and army medical men.

# THE JOURNAL

OF THE

## Missouri State Medical Association

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JANUARY, 1919

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### EDITORIALS

#### ENLARGING THE POWERS OF THE STATE BOARD OF HEALTH

The Missouri State Board of Health is nominally the guardian of the health of the people of the state, but unfortunately its powers to enforce health regulations are exceedingly limited and, therefore, it can function only in the most narrow limits when trying to fulfil its duties. The present law gives the board of health no authority to establish regulations for the control of dangerous diseases except that of quarantine—a very drastic measure and long out of date.

Medical science has progressed to such an extent that certainty and truth have replaced mystery and superstition concerning the causes and courses of contagious diseases so that the board of health can control epidemic diseases at all times by regulations directed against the source of the diseases and the methods of propagation. Consequently there is little or no need to isolate any community as contemplated by our quarantine law and practiced in former years when the nature and mode of the transmission of epidemic diseases were unknown.

The great benefit of giving a health department full authority to act on its own knowledge of what course to pursue in such matters was graphically demonstrated during the recent epidemic of influenza in St. Louis, where the health department has authority to take any measure that it deems necessary to control diseases dangerous to public health. In that epidemic the death rate from influenza in St. Louis was lower than that of any other large city in the country. If a municipality can control such an epidemic so successfully as was done in St. Louis by intelligent regulations enforced by proper authority, the same kind of life saving service can be performed by the state board of health throughout the entire state.

For several years our association and the health workers in Missouri have attempted to obtain reasonable powers for the state board of health, but always without success. This year the board of health will again seek such recognition and authority and has prepared a bill for early introduction in the legislature which will, if it is adopted, give Missouri one of the best state health laws in the country, as

it is a composite of the most successful measures of the kind in force in the various states of the Union. When the bill is introduced copies will be sent to county societies and our members will be asked to give the measure their earnest attention with the view of assisting in its passage.

#### ST. LOUIS SCHOOL OF OCCUPATIONAL THERAPY

The St. Louis School of Occupational Therapy has been formed by a group of individuals representing a number of important institutions in St. Louis. This group was called together by the Woman's Committee, Council of National Defense. Some of the institutions represented are the Woman's Committee, Council of National Defense, St. Louis Junior League, St. Louis School of Fine Arts, the medical departments of Washington University and St. Louis University, the Board of Education, the Federal Board of Vocational Training, the Ranken Trade School, and the city medical institutions.

The purpose of the course is to train women to conduct occupational therapy in military and civil hospitals, and this training is being carried out according to the plan outlined by the Surgeon-General of the Army. The course consists of a period of training in craft work, a series of about forty lectures on medical and allied subjects, and a period of about two months of practice teaching in hospitals in St. Louis. The whole course will last approximately four months.

Miss Alice Dean, a graduate of the School of Occupations in Chicago, is director of the school. The school has no financial backing except a contribution made by the Junior League of St. Louis and by several private individuals. It is the purpose of those interested in the school to establish an institute for the industrial betterment of the physically handicapped, especially of the civilian population. To this end it is hoped that a permanent organization can be established which will stand between the hospitals and the industrial world and endeavor in a number of ways to adjust the individual worker so that he may be able to carry on work which will be possible for him in spite of his physical handicap. Occupational therapy is considered the first step in this larger movement, which must include occupational advice and training, therapeutic work-shops, and a placement bureau for the handicapped.

At present the St. Louis School of Occupational Therapy is being conducted in the St. Louis School of Fine Arts and has sixteen students in the first class. It is proposed to begin with another group of students about February 15.



## PHYSICAL HEALTH AND MENTAL GROWTH FOR HANDICAPPED CHILDREN

A resident Open Air School, operated in conjunction with the board of education, is the latest department of the St. Louis Tuberculosis Society. The school has been established on the grounds of the Night and Day Camp, which is run by the Tuberculosis Society as a pre-ventorium for working girls and women.

The board of education have been operating two open air schools for several years and from these two schools were selected fifteen girls, ranging in age from 9 to 15, and so chosen because they had made no material gain in weight or strength during the year or more in which they had been in attendance. Most of these children are very frail and come from homes where there are active cases of tuberculosis, or homes in which it would be impossible even for a healthy child to thrive.

The school is still in the experimental stage. The plan is to have the children remain in the school for a period of six months at least to see if with proper diet, medical and personal care, great strides cannot be effected in their development. They will be permitted to go home at regular intervals each month. A nurse, working under direction of the hygiene department of the board of education, superintends the diet, medical and personal care and recreation. Their recreation is carefully watched and at no time allowed to become strenuous. The teacher, who has been teaching in the William Taussig Open Air School, lives here and aids greatly in entertaining the children after school hours.

The children sleep on a long sleeping porch arranged like a dormitory, and even in the most extreme wheather the children will sleep out of doors; they are protected from the rain by canvas curtains and from the cold by many pairs of woolen blankets.

The actual cost of maintenance per child is \$2 a day, but the children are charged 17 cents and this only if they are able to pay. Only four of the fifteen children pay this amount, the rest paying part or nothing at all. The arrangement with the board of education is very satisfactory. The teacher and schoolroom equipment is provided by them, everything else by the Tuberculosis Society.

At the end of the six months it is hoped that the Resident Open Air School will become a permanent institution and that all the children in attendance will have shown a very marked improvement.

## STUDY OF RESUSCITATION

The Third Resuscitation Commission of the committee on safety rules and accident prevention of the National Electric Light Association has issued the report of its meeting held at the Rockefeller Institute in New York, May 17, 1918. The commission recommends that instruction in resuscitation methods be given to students in medical colleges, physicians in hospitals, the police and firemen, and workmen in industrial institutions in general. It recognizes the need of a reliable method of mechanical apparatus and recommends further study of this problem. For the present it takes no stand for or against any apparatus but believes their installation should be confined to properly equipped institutions and used under medical supervision. The following resolutions were adopted:

1. The prone-pressure or Schäfer method of resuscitation is preferable to any of the other manual methods.

2. Medical schools, hospitals, fire and police departments, the Army and Navy, first aid associations, and industrial establishments in general, should be urged to give instruction in the use of the prone-pressure method of resuscitation.

3. Individuals who, from accident or any other cause, are in need of artificial respiration, should be given manual treatment by the prone-pressure method immediately on the spot where they are found. It is all important that this aid be rendered at once. The delay incident to removal to a hospital or elsewhere may be fatal, and is justifiable only where there is no one at hand competent to give artificial respiration. If complications exist or arise, which require hospital treatment, artificial respiration should be maintained in transit, and after arrival at the hospital, until spontaneous respirations begin.

4. Persons receiving artificial respiration should, as much as possible, be kept warm and the artificial respiration should be maintained till spontaneous breathing has been permanently restored, or as long as signs of life are present. Even in cases where there is no sign of returning animation, artificial respiration should be kept up for an hour or more.

5. A brief return of spontaneous respiration is not a certain indication for terminating the treatment. Not infrequently the patient after a temporary recovery of respiration stops breathing again. The patient must be watched and if normal breathing stops, the artificial respiration should be resumed at once.

6. Artificial respiration is required only when natural respiration has ceased. In cases of simple unconsciousness from any cause in which natural respiration continues, artificial respiration should not be employed without medical advice.

7. The commission recommends that in cases of gas asphyxiation, artificial respiration, whether given by a manual method or by special apparatus, should be combined when possible with the inhalation of oxygen, from properly constructed apparatus.

8. With regard to the employment of mechanical devices for artificial respiration the commission feels that it ought not at present to take a definite stand either for or against any particular form of apparatus. However, the commission recommends that the use and installation of apparatus should be confined, for the present, to properly equipped institutions under medical direction. The commission recognizes the great need of simple devices capable of performing artificial respiration reliably and efficiently. It therefore recommends careful study of the problem, directed toward *the development of a reliable method appropriate for general adoption*. Such studies can best be carried on in properly equipped hospitals and laboratories which offer opportunities and facilities for critical observation and experimentation.

In view of the importance which the knowledge of proper methods of resuscitation possesses for public health and safety, and considering the fact that many practitioners, members of hospital staffs and graduates of medicine are not thoroughly familiar with the methods of resuscitation, especially that of the prone-pressure method, the commission recommends:

(a) That medical journals (and other scientific and practical journals which are interested in the problem of resuscitation) be asked to publish the resolutions adopted by the commission.

(b) That a copy of these resolutions be sent to the medical colleges with a request that proper instruction in this subject shall be arranged for in the college schedules.

(c) That these resolutions be sent to as many hospitals as possible, with the recommendations that members of the house staff shall familiarize themselves with the methods of resuscitation.

The commission is composed of eminent physicians and scientists drawn from the teaching staffs of accredited medical schools and from the Army and Navy. A committee was appointed to collect verifiable data relating to resuscitation as follows: Dr. D. L. Edsall, Dr. Reid Hunt and Prof. Elihu Thomson.

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## ANNUAL REPORTS OF MISSOURI STATE BOARD OF HEALTH WANTED

The library of the St. Louis Medical Society is making an effort to complete its file of the annual reports of the Missouri State Board of Health. The reports for the following years are lacking: 1887, 1895 to 1907, inclusive, 1909, 1910, 1912, and the board of health has no duplicates to distribute. If any member of the association will furnish one or more of these volumes he may be assured of the sincere appreciation of the Library Committee. Address Library, St. Louis Medical Society, 3525 Pine Street, St. Louis, Mo.

## OBITUARY

GEORGE E. FARR, M.D.

Capt. George E. Farr, Shelbyville, Mo., Medical Corps, U. S. Army, on duty on the Mexican border, died in the base hospital at Brownsville, Texas, October 30, from pneumonia, following influenza, aged 39. He was a graduate of University Medical College of Kansas City, 1906, and was a member of the Shelbyville County Medical Society for several years. He is the sixth physician from Missouri who died while in service.

GUY AUSTIN TULL, M.D.

Lieut. Guy A. Tull of Kansas City, who joined the Medical Reserve Corps soon after the declaration of war with Germany, is the fifth member of our association who has died in the service. Dr. Tull was on duty with the Three Hundred and Fifty-Third Infantry, Camp Funston, Kan., when he became ill and was furloughed to his home, where he died from chronic interstitial nephritis. He was a member of the Jackson County Medical Society, a Fellow of the American Medical Association, and a Fellow of the American Academy of Medicine.

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## NEWS NOTES

MAJOR JOHN C. MORFIT of St. Louis has been promoted to lieutenant-colonel.

A SUIT for malpractice against two of our members made defendants jointly has been dismissed by the trial court because the plaintiff could not show any cause for action.

DR. ADRIEN S. BLEYER of St. Louis has arrived in France and will serve in the American Red Cross. He has been assigned to the Children's Bureau of the Red Cross Service.

THE Buchanan County Medical Society has appointed a banquet committee to prepare a suitable welcome to the members who have served in the war when they return home.

Dr. Frank X. Hartigan was wounded when the Germans bombed the hospital where he was stationed. He has recovered and according to latest advices will enter Germany with the American Army of occupation.

Dr. H. E. Happel of St. Louis, captain in the Medical Corps of the Army, almost got over there before the row was stopped. He has now been assigned to Base Hospital No. 2, Fort McHenry, Md., to do reconstruction work among the soldiers.



THE *Buffalo Medical Journal*, founded by Dr. Austin Flint twenty-seven years ago and published without interruption, has been purchased by the *Medical Review of Reviews* and will be consolidated with that publication beginning January, 1919.

Dr. J. R. Clemens, who formerly practiced in St. Louis, but has been dean of the John A. Creighton Medical College, Omaha, Neb., for several years and later major in the Medical Corps of the Army, has returned to St. Louis and will resume his practice in that city.

Dr. A. C. PETTIJOHN of Brookfield, formerly superintendent of State Hospital No. 2 at St. Joseph, and later superintendent of the Eastern Oklahoma Hospital for the Insane at Vinita, Oklahoma, is now resident physician at the Dr. C. R. Woodson Sanitarium, St. Joseph, Mo.

DURING November the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

National Pathological Laboratories: Rabies Vaccine (Harris).

Schering and Glatz: Creosote Carbonate, S. and G.; Guaiacol Carbonate, S. and G.

AN open air school, combining the features of a boarding school and day school, for girls of subnormal physique and consequent deficient mental development, has been established by the St. Louis Tuberculosis Society and the public school authorities at St. Louis. It is said to be the first institution of its kind and the experiment will be tested for a period of six months. The school opens with fifteen children in attendance.

We have learned that another member of our association has paid the supreme sacrifice in defense of our country, Lieut. W. A. Fair of Pleasant Hill. He is the seventh member whose life has been sacrificed since the war began. He was killed October 6 in the Argonne Forest battle while attempting to aid a wounded brother officer lying in an exposed position under machine gun fire. We will publish a full account of Dr. Fair's life in our next issue.

THE H. K. Mulford Company have purchased, and will soon occupy, the modern building, located at Broad, Wallace and Fifteenth Streets, on Philadelphia's main thoroughfare. The structure will be equipped with modern labor-saving devices and when occupied will house the general offices and the drug, chemical and pharmaceutical departments which are now distributed over a number of buildings in several locations. This will be the largest building in the world devoted exclusively to the production of medicinal products.

THE municipal authorities of St. Louis have purchased the buildings formerly occupied by the National University of Arts and Sciences and altered and equipped them to serve as a city hospital for negroes. The staff of the hospital will be composed of negro physicians. Dr. R. C. Haskell, a graduate of Howard Medical School of Washington, D. C., who has had considerable experience as an intern in several hospitals, including the General Hospital at Kansas City, Mo., has been appointed superintendent of the institution.

THE Kansas City board of health appointed an advisory committee of well known physicians in Kansas City to assist the board in fighting the epidemic of influenza. Of course the physicians were requested to serve without compensation, which they did. The board of health then proceeded to do as they pleased with the recommendations of the advisory committee, sometimes following its advice at other times refusing to do so. The advisory committee finally refused to serve under such discouraging conditions and resigned, and a member of the board of health thoroughly disheartened with the majority's erratic behavior, resigned his position.

We learn that the following Missouri physicians who were held prisoners by Germany have been released and probably now are in France or on their way home: Capt. Arthur H. Sewing, St. Louis, member of the St. Louis Medical Society; Capt. John F. Hardesty, formerly of St. Louis, but registering for the service from Winfield, Mo., a member of the St. Louis Medical Society; Lieut. H. L. Rothman, St. Louis, formerly of Washington, Mo., a member of the Franklin County Medical Society and a son of Dr. P. M. Rothman of St. Louis; Lieut. L. M. Edens, Cabool, a member of the Texas County Medical Society; Lieut. H. A. Goodrich, Webster Groves.

THE Department of Labor and Industry of Pennsylvania has held semi-annual conferences of industrial physicians and surgeons during the past several years which has resulted in bringing much useful information to the attention of those who are engaged in this phase of medical practice. The department is now asking for the names and addresses of all physicians who give special or exclusive attention to industrial medicine so that announcements of the next meeting of the conference may be sent to them. It is probable the next meeting will be held in Pennsylvania early in 1919. Physicians who are interested in this announcement should address Dr. Francis D. Patterson, Chief, Division of Hygiene, Harrisburg, Pennsylvania.

WE have just learned of the death of two more Missouri physicians while in the service of their country, making a total of nine physicians from Missouri whose lives have been sacrificed in the great war. The two who died recently are: Lieut. J. Louis Swarts, St. Louis, Medical Corps of the Army, a member of the St. Louis Medical Society and of the State Association, died from pneumonia at Fort Oglethorpe, Ga., December 24; Lieut. Lloyd R. Boutwell, Kirkwood, Medical Corps, died from wounds received at the front in France, November 14. We will give an account of the lives of these young men in our next issue.

The release of physicians from service in the Army and Navy will permit most of our members to return home and resume their practices. We shall publish the names and addresses of these members in a column of THE JOURNAL and, therefore, we request that this information be transmitted to us so we can have THE JOURNAL sent to them at the proper addresses. We have learned that the following members have returned to their homes: John A. Best, High Hill; Capt. G. B. Benson, St. Louis; L. J. Dandurant, St. Joseph; Fayette C. Ewing, St. Louis; C. M. Grace, Chillicothe; A. H. Hamel, St. Louis; G. W. Hawkins, Salisbury; P. I. Leonard, St. Joseph; E. J. Mairs, Laredo; Robert E. Schlueter, St. Louis; B. B. Simmons, St. Joseph; F. H. Spencer, St. Joseph; G. R. Stevenson, St. Joseph.

WE are very pleased to announce the addition to our advertising pages of the following three firms whose products have won recognition by the profession: Mellin's Food Company, which is so well known that to mention it is almost to describe Mellin's Food, begins a twelve time order in this issue. Another well known firm, manufacturers of pharmaceutical products, is Hynson, Westcott & Dunning of Baltimore, Md. Their initial announcement appears in this issue and their advertisement will appear in each issue during 1919. The other firm whose product has attracted the favorable attention of physicians is the Denny's Products Company, manufacturers of Denny's Food for the modification of cow's milk in infant feeding. We invite the attention of our members to these new advertisements and in doing so will again remind them that the patrons of our advertising pages are worthy of first consideration when members make purchases, because these firms endeavor to conduct their business in harmony with the ideals of the organized medical profession.

## MEMBERSHIP CHANGES, DECEMBER

### NEW MEMBERS

Archibald, James S., St. Louis.  
Fortune, Daniel, Clarksville.  
Greene, Alberta F. M., Fergus Falls, Minn.  
Horner, James W., Alma.  
Long, Lewis H., Denver.  
Miller, Gregory S., St. Louis.

### CHANGES OF ADDRESS

Cerny, George V., 546 Century Bldg., St. Louis, to 1405 N. Grand Ave.  
Cook, Isaac G., Morrison, Mo., to 3628 California, St. Louis.  
Duffie, W. M., Hamilton, Mo., to Burlingame, Kan.  
Ferguson, Roy H., Summum Sanatorium, Santa Fe, N. M., to St. Vincent Sanatorium, Santa Fe, N. M.  
Magoon, F. L., 715 Century Bldg., St. Louis, to 4423 N. 21st St.  
Miller, W. McN., Columbia, Mo., to St. Louis, Mo.  
Porterfield, Elmo P., 357 Century Bldg., St. Louis, to 5232 Maple Ave.  
Schmid, O. A., 307 Physicians and Surgeons Bldg., St. Joseph, Mo., to 1122 Faraon St.

### DROPPED

Broome, G. Wiley, St. Louis.

### DIED

Grote, William F., St. Louis.  
Matthews, John C., Springfield.

## CORRESPONDENCE

### THE INFLUENZA ORGANISM

*To the Editor:*—Early in the epidemic of influenza we decided that we were dealing with a pneumonitis, pure and simple, that varied in severity from a simple bronchitis to an extensive lobular pneumonia; that this type of infection, producing a progressive pneumonitis, lobular in type (never lobar) almost never ending by a crisis but being an essentially progressive affair which, once having progressed to a certain point the clinical picture of which has been familiar to us all, is unnecessarily fatal; that this should be due to the pneumococcus was hard for us to believe.

We felt that it must be due to some new organism, probably relating to some of the streptococci that cause epidemic pneumonia among swine and horses. Realizing that one can find almost anything in the sputa from inflamed bronchial passages—for instance, in the sputum of measles we often find influenza



bacillus and any of the types of pneumococcus—we made but few sputum examinations. However, we did examine the blood of a great number of patients. In a series of blood examinations, 140 in number, purposely taken from every type of pneumonitis, from the so-called mild influenza to the severe pneumonias, we found a diplo-streptococcus that we had become familiar with in more than 80 per cent. of all the bloods. This organism was present in about 95 per cent. of all the early cases but rarely found in small amounts of blood in the later cases. If large amounts of blood were taken in the latter stages of pneumonia, or after death, this same organism was found but with greater difficulty. It has also been found in lung tissue, in the spleen, in the pleuritic fluid, and in the various abscesses during convalescence.

We have grown this organism from a number of cultures and made a vaccine, using about five million organisms for a dose. There is a slight reaction to this dosage, usually about a half degree of fever and some chilliness.

DAN G. STINE, M.D.

University of Missouri.

## MISCELLANY

### SON OF DR. I. N. ENLOE KILLED IN ACTION IN THE BATTLE OF ARGONNE, FRANCE, SEPT. 29, 1918

We are sure the members of our association will have a sympathetic understanding of the great loss suffered by our fellow member, Dr. Isaac N. Enloe of Jefferson City, in the death of his youngest son, Roscoe, who paid the supreme sacrifice in the defense of his country in the great war, and, therefore, we publish the letter to Dr. Enloe written by Roscoe's twin brother, Robert, telling his father of the death of Roscoe.

Roscoe Enloe was 23 years of age. He volunteered and joined the Army in August, 1917, as a member of Company C, One Hundred and Thirtieth Missouri Guard, Thirty-Fifth Division. He was cited for bravery for voluntarily taking a position in advance of his gun squad where he could observe the enemy and direct the machine gun fire on them. In this position he was under heavy fire constantly, but remained in observation until he was killed.

A third son of Dr. Enloe, First Lieut. Lawrence David Enloe, a member of the Cole County Medical Society, is a member of the Medical Corps of the Army, being on duty with Hospital Unit No. 76, in Vichy, France.

The letter from Robert Enloe follows:

*Dear Papa:*—I suppose that you have been notified of Roscoe's death by this time. If you have not, this will have to be a bad letter for you, as he was killed the evening of September 29. I was with him when he was shot and will do my best to tell you all about it.

As you know we were in the big drive—can't describe much of it to you, but you can believe it is the nearest hell any of us ever hope to go through. We had advanced into positions and were resisting

a counter attack. Ros and I were sitting down behind one of my guns when a German machine gun opened on us. He was shot through the right lung and I was scratched on the knee, two shots through my blouse. I carried him back about twenty feet, laid him down on the ground and did what I could for him, using all my first aid packet. Could do no good, though, and saw he was going, but made a litter out of a couple of raincoats and some poles and sent him back to the first aid station. That was the last I saw of him—about four in the afternoon. He died about nine that night. George Betts was detailed at the hospital and saw him last.

The boy was game to the last—helped me fill him full of gauze and spoke of his "leaking compression" when he tried to breath and the air passed through his wound. The last he said before I sent him back was, "Tell the folks and Olive goodbye for me, Rob." He knew he was going to die but had no fear. I



ROSCOE ENLOE

only hope that when my time comes I will face it as bravely as he did. After the first half hour or so he seemed to be in no pain and I am sure he just went to sleep quietly and never waked up.

Besides Ros there were very few killed, but many wounded. That is about all I can tell you, I suppose, although that is not near all about the drive or our entrance into it and the part we played in it. It is still going on—we hope they run the Germans off the map. Ros managed to get two of them with a 30-30 at about 500 yards, and the rest of the platoon got several more. I have Roscoe's automatic—will carry it from here on out and do all in my power to try to even the score in the only way open to me.

I received letters from home the first of this month, dated from August 17 to the 29. Glad to hear things are all right at home. The hot weather—would welcome it here as we went through our share of the drive without shelter of any kind, just our raincoats, and it rained four nights out of the five I was up.

I don't know where Ros was buried. He was seen last in a first aid hospital in the village of Charpentry, about 20 or 25 kilometers northwest of Verdun. He was moved from there, though, I am sure. May be able to locate him on our next visit to that locality. Will close, with love to all, your son, ROBERT.

## LICENSED BY THE MISSOURI STATE BOARD OF HEALTH

The following were granted licenses to practice medicine and surgery in Missouri, on examination and by reciprocity, before the Missouri State Board of Health, September 30, October 1, 2, 1918:

Name	Home Address	Graduated	Year
Baker, Wilbur A.....	Kansas City, Mo.....	University of Kansas.....	1917
Belknap, Paul E.....	Kansas City, Mo.....	University of Kansas.....	1918
Chipp, Joseph K.....	New Hampton, Mo.....	Central Medical College of St. Joseph.....	1899
de Lamadrid, Francisco S.....	Havana, Cuba.....	College of Physicians and Surgeons of St. Louis....	1918
Hall, Henry W. (Col.).....	Kansas City, Mo.....	Meharry Medical College.....	1918
Haning, Moses L.....	Humphreys, Mo.....	Marion-Sims-Beaumont Col. of Medicine, St. Louis..	1903
Haughey, Geo. C.....	Advance, Mo.....	Loyola University.....	1916
James, William E.....	Merriam, Kan.....	University of Kansas.....	1918
Kloepfel, Carl F.....	Webster Groves, Mo.....	College of Physicians and Surgeons of St. Louis....	1918
Koch, Albert H.....	St. Louis, Mo.....	College of Physicians and Surgeons of St. Louis....	1913
Miller, Max M.....	Drexel, Mo.....	Northwestern University.....	1918
Murphy, George W.....	Addington, Okla.....	Fort Worth School of Medicine.....	1896
Niblick, James S.....	Indiana Harbor, Ind.....	Chicago College of Medicine and Surgery.....	1918
Nigro, Dominica M.....	Kansas City, Mo.....	John A. Creighton University.....	1918
Peebles, Clifton L. (Col.).....	Columbus, Ky.....	Meharry Medical College.....	1918
Reys, Antonio R.....	Evanston, Ill.....	Loyola University.....	1917
Sayers, Vance W.....	Franklin, Pa.....	College of Physicians and Surgeons of St. Louis....	1918
Scimeca, Salvatore A.....	St. Louis, Mo.....	College of Physicians and Surgeons of St. Louis....	1918
See, Samuel D.....	Eagleville, Mo.....	National University A. and S.....	1918
Westaver, Edward C.....	St. Louis, Mo.....	College of Physicians and Surgeons of St. Louis....	1918
Williams, Walter J. (Col.).....	Edwardsville, Ill.....	Meharry Medical College.....	1913

## LICENSED BY RECIPROCITY

Name	Home Address	Original License Granted	Year
Baker, Henry Anthony.....	Kansas City, Mo.....	Pennsylvania.....	1891
Curry, Arthur Blythe.....	Grafton, Ill.....	Illinois.....	1914
Darland, Mary Edna.....	Rosedale, Kan.....	Kansas.....	1915
Fausset, Elmo Millard.....	Kansas City, Kan.....	Kansas.....	1910
Gragg, H. N.....	Jordon, Mont.....	Kentucky.....	1889
Graham, John Alexander.....	Salina, Kan.....	Illinois.....	1915
Hambrick, William Anderson.....	Nashville, Tenn.....	Tennessee.....	1916
Knappenberger, George E.....	Kansas City, Mo.....	Kansas.....	1911
Mosher, Arthur Hall.....	Le Mars, Iowa.....	Iowa.....	1882
Parker, Thadd.....	Strong, Colo.....	Michigan.....	1891
Roe, Benjamin Franklin.....	Kansas City, Mo.....	Kansas.....	1908
Simpson, Samuel Ellis.....	Oregon, Mo.....	Nebraska.....	1915
Trice, Hoyt Sale.....	St. Louis, Mo.....	Louisiana.....	1910
Stock, George Andrew.....	Webb City, Mo.....	Louisiana.....	1898
Van Metre, Paul W.....	Columbia, Mo.....	Iowa.....	1910

### FIGHT AGAINST YELLOW FEVER RENEWED BY ROCKEFELLER FOUNDATION

The International Health Board of the Rockefeller Foundation began a campaign for the complete eradication of yellow fever in 1914 and in 1916 appointed a yellow fever commission with Gen. W. C. Gorgas at its head to establish measures for accomplishing the object. The commission visited regions in South America in which the disease was reported or suspected and submitted a report of its findings, but the war conditions compelled suspension of the work. Dr. George R. Vincent, president of the Rockefeller Foundation, now announces that the commission will resume its activity against yellow fever and General Gorgas has again assumed direction of the expedition. The announcement by Dr. Vincent continues:

Dr. Gorgas will sail within a short time for Central and South America. Dr. N. E. Connor has already preceded him to Guayaquil, on invitation of the government of Ecuador. He will guide the local operations, which will be done by men appointed by the local authorities.

The program which General Gorgas will now actively develop, results from a study of the yellow

fever problem by the International Health Board, which began its labors in July, 1914.

The opening of the Panama Canal, with the establishment of new world trade routes, brought the danger of a wide distribution of yellow fever. Its appearance in Asia, for example, would be a catastrophe.

To obtain authoritative information and counsel, the board appointed a yellow fever commission, headed by General Gorgas. Associated with him were Dr. Henry R. Carter of the United States Public Health Service; Dr. Juan Guiteras, chief health officer of Havana; Major T. C. Lyster and Major E. R. Whitmore of the Medical Department, United States Army, and Mr. W. D. Wrightson.

To define the problem accurately, the commission, in the spring and summer of 1916, visited all countries in South America in which yellow fever had appeared in recent years. On its return it presented a report, expressing the opinion, in which all members of the commission concurred, that the total eradication of yellow fever was feasible.

In January, 1917, the board adopted a working program and appointed Dr. Gorgas director. The Secretary of War had agreed to release the surgeon-general for this service, but the war compelled a postponement of the work which is now to be resumed.



**ORDERS TO MISSOURI PHYSICIANS IN  
THE MEDICAL CORPS OF THE ARMY  
FROM NOVEMBER 25 TO DECEMBER  
14, INCLUSIVE**

Alton, Capt. G. P., Barry, to Fort Sam Houston, Texas, base hospital.

Bigsby, Capt. F. L., Kirksville, to Camp Shelby, Miss., base hospital, from Camp Jackson.

Billeter, Lieut. W. J., Bynumville, to Fort McPherson, Ga., from Lexington, Va.

Bokhof, Capt. D. H., West Line, to San Antonio, Texas, Kelly Field from Fort Wayne.

Brewster, Capt. R. B., Kansas City, to Pittsburg, Kan., State Normal School, from Kansas City, Mo.

Burdick, Lieut. C. H., St. Louis, to Camp Gordon, Ga., as camp psychiatrist, from Camp McClellan.

Cadwell, Capt. V., Poplar Bluff, to Camp Crane, Pa., surgical group, from Colonia, N. J.

Campbell, Lieut. A. J., Sedalia, to Camp Crane, Pa., evacuation hospital, from Camp Pike.

Carley, Capt. H. D., St. Louis, to Salina, Kan., Kansas Wesleyan University, from Kansas City, Mo.

Coats, Lieut. C. C., Winston, to San Antonio, Texas, Kelly Field, from Wichita Falls.

Cohn, Lieut. A. R., Kansas City, to Camp Hancock, Ga., base hospital, from Camp Sheridan.

Crooks, Lieut. O. R., Kansas City, to Camp Beauregard, La., base hospital, from Fort Riley.

Dean, Lieut. L. E., Maryville, to Fort Oglethorpe, from Camp MacArthur.

Decker, Lieut. A. J., Grayridge, to Camp McClellan, Ala., base hospital, from Fort Benjamin Harrison.

DeHoney, Lieut. F. R., Fredericktown, to New Haven, Conn., from Fort Benjamin Harrison.

Donohue, Lieut. J. C., St. Louis, to Fort Oglethorpe, from Camp Zachary Taylor.

Fair, Lieut. S. W., Belton, to New York, Bellevue Hospital for instruction, and on completion to his proper station, from Camp Jackson.

Fogle, Capt. R. L., Otterville, to Camp Jackson, S. C., from Camp Custer.

Gross, Capt. J. H., St. Louis, to Camp Crane, Pa., evacuation hospital, from Camp Pike.

Hamilton, Capt. E. P., Kansas City, to Camp Sevier, S. C., base hospital, from Fort Oglethorpe.

Hayden, Capt. J. G., Kansas City, to Kansas City, Mo., as examiner.

Hearst, Lieut. A. L., Kansas City, to Camp Sheridan, Ala., base hospital, from Fort Oglethorpe.

Heithaus, Capt. A. S., St. Louis, to Fort Oglethorpe, from Camp Pike.

Hereford, Lieut. R., Ashley, order to Jefferson Barracks, Mo., has been revoked.

Horrom, Lieut. G. W., Rolla, to Baltimore, Md., from Fort Riley.

Hughes, Lieut. J. W., Leadwood, to Fort Riley, base hospital, from Fort Oglethorpe.

Hyland, Lieut. R. F., St. Louis, to Camp Jackson, S. C., base hospital, for instruction, from Fort Oglethorpe.

Kempff, Capt. L. A., St. Louis, to Camp Wadsworth, S. C., from Camp Kearney.

Kieffer, Capt. V. B., St. Louis, to Rockefeller Institute, for instruction in the treatment of infected wounds, and on completion to Camp Meade, Md., base hospital, for instruction, from Fort Oglethorpe.

Koessel, Lieut. A. W., St. Louis, to West Baden, Ind., from Azalea, N. C.

Kring, Lieut. E. V., St. Louis, to Camp Crane, Pa., from New Haven.

Lilly, Lieut. T. E., Kansas City, to West Baden, Ind., from Camp Dodge.

Marder, Lieut. J. L., St. Louis, to Garden City, N. Y., as tuberculosis examiner, from Syracuse.

Matlock, Lieut. W. L., Sedalia, to Norfolk, Va., camp hospital, from Fort Oglethorpe.

Meanwell, Capt. W. E., Columbia, to Fort McPherson, Ga., from Fort Oglethorpe.

McCartney, Lieut. O. P., Kansas City, to Boston, Mass., from Camp Custer.

Middleton, Capt. J., Kansas City, to Cincinnati, Ohio, from Fort Riley.

Minton, Capt. W. H., St. Joseph, to Fort Oglethorpe, evacuation hospital, from Camp Sevier.

Moennighoff, Capt. F. J., Odessa, to Camp Sherman, Ohio, base hospital, from New York.

Moreland, Capt. G. H., Kansas City, to Camp Crane, Pa., mobile hospital, from Fort Oglethorpe.

Morey, Lieut. O. T., Salisbury, to Astoria, N. Y., from Camp Custer.

Niedringhaus, Capt. R. E., St. Louis, to Fort McPherson, Ga., from Fort Oglethorpe.

O'Connell, Lieut. J., St. Louis, to Camp Crane, Pa., evacuation hospital, from Camp Dodge.

O'Kelley, Capt. F. M., Carterville, to Fort Riley, for instruction, from Manhattan, Kan.

Orr, Lieut. C. A., Mendon, to Boston, Mass., from Camp Custer.

Pare, Lieut. E. Y., Leeton, to Fort Leavenworth, Kan., from Camp Joseph E. Johnston.

Parrish, Lieut. I. N., Polo, to San Antonio, Texas, Kelly Field, from Camp Dick.

Parker, Lieut. H. F., Warrensburg, to Fort Oglethorpe, from Camp Sevier.

Paugh, Capt. P. G., St. Louis, to Fort Snelling, Minn., from Azalea, N. C.

Poe, Lieut. J. D., Wellston, to Camp McClellan, Ala., base hospital, for instruction, from Fort Oglethorpe.

Porterfield, Capt. J. D., Cape Girardeau, to Fort Oglethorpe, evacuation hospital, from Camp Travis.

Rehfeldt, Capt. C. S., St. Louis, to Carlisle, Pa., from Fort Oglethorpe.

Royer, Lieut. D. J., Joplin, to Camp Crane, Pa., base hospital, from Fort Oglethorpe.

Sampson, Lieut. C. M., St. Joseph, to Lakewood, N. J., from Walter Reed General Hospital.

Schmalhorst, Capt. D. E., St. Louis, to Washington, D. C., and on completion to Camp Hancock, Ga., from Hoboken.

Scott, Lieut. C. D., St. Louis, to Camp Upton, N. Y., base hospital, from Camp Grant.

Seelig, Lieut.-Col. M. G., St. Louis, to Rockefeller Institute, for instruction in the treatment of infected wounds, and on completion to his proper station.

Shaw, Major F. W., Mount Vernon, to Camp Meade, Md., from Fort Sill.

Smith, Capt. E. S., Macon, to Newport News, Va., from Camp Leach.

Sparhawk, Lieut. W. J., St. Louis, to Fort Oglethorpe, evacuation hospital, from Camp McClellan.

Spencer, Lieut. F. B., Hannibal, to Camp Shelby, Miss., base hospital, from Fort Oglethorpe.

Stratton, Lieut. C. S., Roscoe, to Fort Warren, Mass., from Camp Devens.

Suggett, Capt. O. L., St. Louis, to New Haven, Conn., from Camp Jackson.

Swahlen, Capt. P. H., St. Louis, to Rochester, Minn., Mayo Clinic, for instruction, and on completion to his proper station, from Camp Pike.



Thompson, Lieut. W. G., Holden, to Wichita, Kan., Fairmont College, from Kansas City, Mo.

Tilles, Capt. R. S., St. Louis, to Camp Jackson, S. C., base hospital, for instruction, from Fort Oglethorpe.

Tucker, Capt. C. A., Springfield, to Fort Oglethorpe, for instruction, from Camp Pike.

Van Hecke, Lieut. D. S., Kansas City, to Camp Meade, Md., from Camp A. A. Humphreys.

Wilson, Lieut. J. M., Stoutsville, to Camp Gordon, Ga., base hospital, for instruction, from Fort Oglethorpe.

Williams, Lieut. J. H., Hume, to New Cumberland, Pa., from Fort Oglethorpe.

Wittwer, Lieut. H. J., St. Louis, to Eastern Department, from Camp Upton.

Yount, Capt. W. E., Cape Girardeau, to Camp MacArthur, Texas, base hospital.

Zoglin, Lieut. N., Kansas City, to Camp Beauregard, La., from Fort Sam Houston.

#### COMMISSIONS OFFERED AND ORDERS TO DUTY ON ACCEPTANCE

Behrens, Capt. L. H., St. Louis, to Fort Oglethorpe for instruction.

Belove, Lieut. B., Kansas City, to Fort Oglethorpe for instruction.

Botts, Lieut. W. F., Santa Fe, to Fort Riley for instruction.

Cox, Lieut. S. S., Wellsville, to Fort Riley for instruction.

Frischer, Lieut. J., Kansas City, to Fort Oglethorpe for instruction.

Gray, Capt. M. S., St. Joseph, to Fort Oglethorpe for instruction.

Grove, Lieut. E. G., Fairfield, to Fort Riley for instruction.

Haffner, Capt. E. L., Hermann, to Fort Oglethorpe for instruction.

Hamilton, Capt. B. G., Kansas City, to Fort Oglethorpe for instruction.

Hamlin, Lieut. J. R., La Grange, to Fort Riley for instruction.

Hardman, Lieut. H. B., Joplin, to Fort Riley for instruction.

Kramolowsky, Lieut. H. H., St. Louis, to Camp Grant, Ill.

Lemmon, Capt. G. B., Springfield, to Plattsburg Barracks, N. Y.

Leyser, Lieut. J. C., Kansas City, to Camp Dodge, Iowa, base hospital.

Lieberman, Major B. A., Kansas City, to Fort Riley for instruction.

Livingstone, Lieut. H. E., St. Louis, to Camp Sheridan, Ala., base hospital.

Marsh, Lieut. H. S., Kansas City, to Camp Zachary Taylor, Ky.

Miller, Lieut. M. M., Kansas City, to Fort Riley for instruction.

Montague, Capt. H. L., St. Louis, to Camp Dodge, Iowa, base hospital for instruction.

Northcutt, Lieut. L. B., Wasburn, to report to the commanding general, Central Department.

Owens, Lieut. N. O., La Grange, to Fort Riley for instruction.

Parrish, Lieut. S. M., Smithton, to Fort Riley for instruction.

Powell, Lieut. B. S., Princeton, to Fort Riley for instruction.

Ragsdale, Lieut. G. M., Paris, to Fort Riley for instruction.

Reeves, Lieut. G. W., Steelville, to Fort Riley for instruction.

Remley, Lieut. A. R., Pattonsburg, to Fort Riley for instruction.

Robertson, Lieut. W. A., Allendale, to Fort Riley for instruction.

Robinson, Lieut. R. R., Hallsville, to Fort Riley for instruction.

Ross, Lieut. P. J., Grant City, to Fort Oglethorpe for instruction.

Russell, Capt. C. W., Springfield, to Camp Beauregard, La., base hospital for instruction.

Russell, Lieut. M. M., Chillicothe, to Fort Riley for instruction.

Snavey, Lieut. E. C., Zora, to Fort Riley for instruction.

Steinmetz, Lieut. J. B., Blackwell, to Fort Riley for instruction.

Switzer, Lieut. C., Kansas City, to Camp Shelby, Miss.

Urban, Capt. E. T., St. Louis, to Camp Travis, Texas, base hospital, for instruction.

Wilbur, Capt. H. L., Granby, to Fort Riley for instruction.

Wilsey, Lieut. A. R., Hurdland, to Fort Riley for instruction.

#### HONORABLE DISCHARGES AND RESIGNATIONS, MEDICAL CORPS, U. S. ARMY

Eberlin, E. W., St. Louis, Mo.

Garner, K. C., Crosstown, Mo.

Hill, E. C., Smithville, Mo.

Parker, R. H., Moscow Mills, Mo.

Shaeffer, W. R., Columbia, Mo.

Stein, W. F., St. Louis, Mo.

### SOCIETY PROCEEDINGS

#### ST. LOUIS MEDICAL SOCIETY

Meeting of Oct. 26, 1918

The meeting was called to order at 9:10 p. m. by the president, Dr. Elsworth S. Smith. The minutes of the meetings of October 12 and October 19 were read and approved.

Dr. Wm. Engelbach introduced Dr. D. G. Stine of Columbia, Mo., Associate Professor of Clinical Medicine, Missouri State University, who read a paper on "Transfusion Treatment of Influenza with Blood from Convalescent Patients."

Discussion by Drs. Albert Taussig, J. J. Singer, M. J. Lippe, John Zahorsky, George Ives, W. D. Auferheide, Edwin J. Schisler, Floyd Stewart, E. P. Buddy, Given Campbell, P. C. Scholz and Henrietta S. Borek; Dr. Stine closing.

A letter from the City Plan Commission was read and referred to the Committee on Health and Public Instruction.

Dr. Buddy moved that the Program Committee be instructed to confer with Health Commissioner Starkloff in regard to holding meetings during the influenza epidemic. Seconded and carried.

Attendance 86.

FLOYD STEWART, M.D., Secretary pro tem.

**Meeting of Nov. 23, 1918**

The meeting was called to order at 8:40 p. m., by Dr. L. E. Newman, in the absence of the president.

The scientific program consisted of the following:

"Special Classes for Children with Defective Sight; An Unfulfilled Local Need," by Dr. John Green Jr.

"The Crippled Child—Its Physical and Educational Needs," by Dr. A. E. Horwitz.

Discussion by Dr. H. L. Wolfner, president of the St. Louis School Board, Dr. J. W. Charles, Dr. J. W. Withers, superintendent of public schools of St. Louis, Dr. Philip Hoffmann, Dr. Emil Simon, Mr. S. M. Green, superintendent Missouri School for the Blind; Drs. Horwitz and Green closing.

Attendance 32.

**Meeting of Nov. 30, 1918**

The meeting was called to order at 9 p. m., by the president, Dr. Elsworth S. Smith.

The scientific program consisted of the following:

"Vertigo in Its Relation to Internal Diseases," by Dr. Albert E. Taussig.

Discussion by Drs. L. K. Guggenheim, William Engelbach and Robert Barclay; Dr. Taussig closing.

"Bone Transplantations," by Dr. Barney Brooks.

Discussion by Dr. Francis Reder; Dr. Brooks closing.

Dr. Hudson Talbott presented a specimen of "Tubal Pregnancy," the tumor being removed twelve days ago.

Attendance 19.

ALBERT F. KOETTER, M.D., Secretary.

**BUCHANAN COUNTY MEDICAL SOCIETY**

The regular meeting of the Buchanan County Medical Society was held in the Assembly Room at the Public Library, Wednesday evening, December 4. Twenty-one members were present, and the president, Dr. Daniel Morton, was in the chair. The minutes of the previous meeting were read and approved.

The application of Dr. Solomon Eugene Muleney of Agency having received its second reading and properly indorsed by the Board of Censors, was voted upon and the doctor elected.

An interesting exhibition of six surgical films was shown.

This being the date for the annual election the following officers were elected for the ensuing year: A. B. McGlothlan, president; C. A. Good, first vice president; B. W. Tadlock, second vice president; W. F. Goetze, secretary; J. M. Bell, treasurer; P. I. Leonard, censor for 1919-20-21; H. S. Forgrave, delegate for 1919 and 1920; Daniel Morton, alternate for 1919 and 1920.

The following resolution introduced by Dr. Lau was adopted:

*Resolved*, That the president appoint a banquet committee, the date of the banquet to be left open awaiting the return of our members who enlisted in the Army and were expected home soon, and that the "Welcome Home" address be delivered by Daniel Morton. The committee was empowered with full authority to act.

There being no further business the meeting adjourned.

W. F. GOETZE, M.D., Secretary.

**HENRY COUNTY MEDICAL SOCIETY**

The Henry County Medical Society met in regular session on Wednesday, December 11, 1918, in the court house at Clinton. The meeting was called to order at 2:30 p. m. by Dr. S. W. Woltzen, vice president. Present, Drs. A. J. McNess, W. R. Campbell,

S. A. Poague, N. I. Stebbins, J. R. Hampton and F. M. Douglass.

Influenza was the subject for discussion.

Dr. Campbell opened the discussion by giving a résumé of his observations and the different complications he had met with. He had but few cases that ran over four days, the other cases lasting about seven days. Where he could control the patient's movements none developed pneumonia, but a number waited until lung pains set in before he was called. A few had meningeal troubles but they were not serious. Pregnant women were a bad risk. No treatment had uniform influence, but opiates were called for and their use was beneficial. Old people were nearly all immune.

DR. POAGUE: I have had patients with a bad backache, like lumbago. I required a warm room, well ventilated.

DR. STEBBINS: I had it, the only case I treated. The doctors at Nevada used the salicylates altogether in these cases. Could use opiates with impunity.

DR. MCNEES: At Camp Funston, prophylaxis was urged. Pneumonia of a mixed variety was found in many cases. They required rooms to be well ventilated day and night, and not too warm, dram doses of digitalis was the treatment. One case I saw had a temperature of 105 F. with bloody sputum.

DR. HAMPTON: I required them to stay in bed until I thought no other trouble would set in.

Election of officers: Dr. S. W. Woltzen, president; Dr. J. R. Hampton, vice president; Dr. F. M. Douglass, secretary and treasurer; Dr. S. A. Poague, censor.

Dr. Edwin C. Peelor was received back into Society by transfer. Dr. William Kelly of Ladue was elected a member.

F. M. DOUGLASS, M.D., Secretary-Reporter.

**THE TRUTH ABOUT MEDICINES****NEW AND NONOFFICIAL REMEDIES**

Since publication of New and Nonofficial Remedies, 1918, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**LUTEIN TABLETS**—H. W. AND D., 2 GRAINS.—Each tablet contains 2 grains of lutein (the fully developed corpora lutea of the hog, dried and powdered). Hynson, Westcott and Dunning, Baltimore, Md. (*Jour. A. M. A.*, Nov. 2, 1918, p. 1485).

**RABIES VACCINE (HARRIS)**.—An antirabic vaccine standardized by the method of Dr. Harris and stored in vacuo. Each package contains vaccine and apparatus for the administration of one complete treatment. One dose is given daily for ten days or more. National Pathological Laboratories, Chicago (*Jour. A. M. A.*, Nov. 30, 1918, p. 1825).

**PROPAGANDA FOR REFORM**

**PENEGUENTS**.—Indiana physicians have been visited by the representative of the American Ointment Company who distributes samples and discourses on "Peneguents." He admits that his preparations have not been accepted by the Council on Pharmacy and Chemistry, but attempts to offset this by a report of the National Research Council which he hands out with other "literature." A glance at the Ointment



Company's "literature" makes it clear that its preparations could not be admitted to New and Nonofficial Remedies. The report of the Research Council does not pretend to pass on the therapeutic usefulness of the preparations, but apparently was made to check the statements made in regard to their composition. It brings out that the composition of the ointment base is not divulged by the manufacturer, and that "Pene-guent Chlor-Iodine," claimed to contain "Iodine Resub. 5%," contains but 0.37 per cent. free iodine, the remaining iodine having combined with the ointment base. Since the complex and semisecret character of their formulas and the unwarranted claims should have been sufficient to preclude the use of these proprietaries by the U. S. Army, it is difficult to understand why the examination was made (*Jour. Ind. State Med. Assn.*, Oct. 15, 1918, p. 374).

**DIGESTIVE ABSURDITIES.**—Scientific investigations have demonstrated beyond any doubt the irrationality of the combinations of digestive ferments which go to make up the various brands of aromatic digestive tablets, and all chemists and manufacturing pharmacists are familiar with these facts. The excuse for manufacturing them is that there is a call for them. It is a question whether the physician who ignorantly prescribes aromatic digestive tablets is not more morally culpable than the pharmaceutical house that supplies what such physicians demand (*Jour. A. M. A.*, Nov. 2, 1918, p. 1489).

**DEPENDABILITY OF DOSAGE IN TABLETS.**—One of its products (Aromatic Digestive Tablets) having been reported deficient by the Connecticut Agricultural Experiment station, the Harvey Company, Saratoga Springs, N. Y., holds that it should not be criticized if its Aromatic Digestive Tablets are below the declared strength. It seems to hold the opinion that it does not matter whether or not these tablets contain the amount of ferments claimed on the label, since in any case these ferments would mutually destroy each other as soon as such a tablet came in contact with the digestive secretion. No excuse can be offered for those physicians who prescribe such absurdities as Aromatic Digestive Tablets, but neither is there any justification for a firm selling a product which it knows will not measure up to the claims made for it (*Jour. A. M. A.*, Nov. 2, 1918, p. 1510).

**VALUE OF VACCINATION AGAINST INFLUENZA.**—There is no conclusive evidence that the Pfeiffer bacillus plays any greater rôle, if as great, in the present epidemic than any other bacteria found in the respiratory tract in this disease. Also, the influenza bacillus is a very poor antigen. There is, in fact, nothing to show that definite antibodies against this bacillus develop in the course of influenza. Animal experiments show that it requires prolonged immunization before any response becomes apparent. Again, there is no record of controlled experiments on human beings with influenza vaccine. From this it is evident that vaccination against influenza is in a wholly experimental stage (*Jour. A. M. A.*, Nov. 9, 1918, p. 1583).

**MORE MISBRANDED NOSTRUMS.**—The following nostrums have been proceeded against under the Federal Food and Drugs Act: Baker's Tubercular Remedy, containing 11 per cent. alcohol by volume, sugars, potassium iodid, ammonium chlorid, glycerin, licorice, plant extractives, etc. Lee's Save the Baby Croup Specific, a liniment with a fatty oil base containing camphor, rosemary and thyme. Lee's Croup Mixture, containing over 70 per cent. of lard, about 7 per cent. alcohol, and over 18 per cent. volatile oils, consisting of a mixture of oils of rosemary and thyme and camphor. Twentieth Century, consisting of a powder and a solution, the latter, essentially a mixture of water, glycerin, lead and zinc sulphates, acetates, nitrates,

and a small quantity of perfume. Moreau's Soothing Wine of Anise a syrup containing morphin acetate and alcohol, and flavored with anise. Professor C. E. Matthai's Victory, containing 49 per cent. alcohol, 1.2 grains of opium to the fluidounce, and 3.5 per cent. camphor and volatile oil, and small amounts of red pepper. Sensapersa, tablets containing asafetida, cannabis indica, and a drug containing a mydriatic alkaloid (*Jour. A. M. A.*, Nov. 9, 1918, p. 1601).

**MORE MISBRANDED NOSTRUMS.**—The following "patent medicines" have been declared misbranded under the U. S. Food and Drugs Act, and a "Notice of Judgment" giving an account of the prosecutions issued by the U. S. Department of Agriculture for each: Jacobs' Liver Salt, an effervescent preparation consisting largely of sodium phosphate, sodium sulphate, and sodium chlorid. Lydia Pinkham's Vegetable Compound, containing 17.9 per cent. alcohol, and 0.56 gm. of solids to each 100 c.c., with vegetable extractive material present. Maguire's Extract of Benne Plant and Catechu Compound, containing over 39 per cent. of alcohol and  $\frac{1}{40}$  grain of morphin to each fluidounce, besides camphor, catechu and peppermint. Hood's Sarsaparilla, a mixture of alcohol and water, containing about 0.9 per cent. of potassium iodid with sugar, vegetable extractives, which give indications of the presence of sarsaparilla, licorice, and a laxative drug resembling senna. Booth's Hyomei Dri-Ayr, consisting essentially of oil of eucalyptus, together with a small amount of resin-like solids and a mineral oil and a little alcohol. Hill's Kidney Kaskara Tablets, an iron oxid, sugar-coated tablet carrying emodin, caffein, acid resin, magnesium carbonate and talcum. Hancock Sulphur Compound, a calcium sulphid solution. Hancock Sulphur Compound Ointment, a petrolatum ointment containing sulphur, ash (chiefly lime) and phenol. Palmer's Skin Whitener, containing ammoniated mercury, mixed with a fatty base. Grossman's Specific Mixture, a balsam copaiba mixture (*Jour. A. M. A.*, Nov. 16, 1918, p. 1681).

**A SHORT SIGHTED DRUGGIST.**—A correspondent writes: "I went to a nearby drug store and asked for 25 cents' worth of Liquor Antisepticus Alkalinus; I got one ounce! The druggist charged me 15 cents an ounce, and 10 cents for the container. Next time I fear I shall be forced to get Glycothymoline!" To penalize a man who calls for an official product so as to drive him to ask for a "patent medicine" of the same general character is both poor pharmacy and bad business (*Jour. A. M. A.*, Nov. 23, 1918, p. 1745).

**KENNEDY'S TONIC PORT.**—Kennedy's Tonic Port was booze sold as "patent medicine." Its conflict with the law came when a bottle of the preparation was sold at a Regina drug store in November, 1917, in that the sale of alcoholic beverages is prohibited in Saskatchewan. The Saskatchewan authorities proceeded against this concern, and the drug store proprietors were convicted and fined. They appealed the case, but the judge before whom the appeal was heard decided against the concern and increased the fine. Booze is booze in Saskatchewan (*Jour. A. M. A.*, Nov. 23, 1918, p. 1763).

**COMPOUND SOLUTION OF CRESOL.**—In an eastern institution where members of the U. S. hospital corps are being instructed, a bottle containing Liquor Cresolis Compositus is labeled "Lysol" so that doctors may recognize it. Comment is superfluous (*Jour. A. M. A.*, Nov. 30, 1918, p. 1830).

**AUTOLYSIN AND BEER.**—Henry Smith Williams, who exploits "Proteal Therapy," also runs a publishing concern, the Goodhue Company, and has associated with him his brother, Edward Huntington Williams. Some time ago, complimentary copies of a book,



"Alcohol, Hygiene and Legislation," written by Edward Huntington Williams, and published by the Goodhue Company, were sent broadcast to physicians with the compliments of author and publisher. The book championed the lighter alcoholic beverages and questioned the value of prohibition. Enclosed with the book was an advertising leaflet on the "Autolysin" cancer cure and a letter calling attention to a book by Henry Smith Williams on the Autolysin Treatment of Cancer. Now the secretary of the United States Brewers' Association has testified before a Senate Committee, according to newspaper reports, that a "Dr. Edward H. Williams" was employed to write articles "relating to the brewers' trade." Is the Dr. Edward Huntington Williams who wrote "Alcohol, Hygiene and Legislation" the "Dr. Edward H. Williams" who was employed by the brewers to write propaganda favorable to the brewing interests? Was the cloth-bound book, "Alcohol, Hygiene and Legislation," paid for, wholly or in part, by the United States Brewers' Association (*Jour. A. M. A.*, Nov. 30, 1918, p. 1846)?

SPENCER'S CHLORAMINE PASTILLES.—The term "chloramin" is applied to a class of chemical compounds that contain the group: NCl. The chloramin derivative sodium paratoluenesulphochloramid has been called chloramin-T, "chloramin" indicating the characteristic NCl group, and the "T" derivation from toluene. Sodium parabenzenesulphochloramid has been chloramin-B, the "B" indicating its origin from benzene. Before chloramin-T and the related products came into use in medicine, John Wyeth and Brother had registered the term "chloramine" as a trademark for a pharmaceutical preparation and applied it to a lozenge containing ammonium chlorid, "Spencer's Chloramine Pastilles," which in no sense is a chloramin. This misuse of a chemical term indicates the need of a revision of our trademark law which permitted the registration of this evidently misleading term (*Jour. A. M. A.*, Nov. 30, 1918, p. 1848).

## BOOK REVIEWS

THE SURGICAL CLINICS OF CHICAGO, October, 1918. W. B. Saunders Company, Philadelphia.

This issue contains contributions from the clinics of eleven surgeons in Chicago, the leading article being from the clinic of Dr. Arthur Dean Bevan, Presbyterian Hospital.

ABSTRACTS OF WAR SURGERY. An Abstract of the War Literature of General Surgery That Has Been Published Since the Declaration of War in 1914. Prepared by the Division of Surgery, Surgeon-General's Office. C. V. Mosby Company, St. Louis, 1918. Price, \$4.00.

One who has searched the literature for all that has been written on a special subject in the field of war surgery will readily perceive the great value of this very complete volume. Articles abstracted have appeared in medical journals since the beginning of the war and represent the most important papers written on war surgery in French, English and Italian. The title of each abstract is followed by the author and volume and number of the journal in which the original article appeared, so no time is lost in locating the source of information. The table of contents gives a full list of topics, and the exhaustive index which is appended makes this work a valuable text for ready reference. N. V. C.

MEDICAL DIAGNOSIS FOR THE STUDENT AND PRACTITIONER. By Charles Lyman Greene, M.D., St. Paul; Professor of Medicine, Chief of the Department of Medicine and Chief of Medical Clinic in the University of Minnesota Hospitals, 1909-1915; Author of the medical examination for life insurance and its associated clinical methods, etc. With 14 colored plates and 548 other illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Price, \$10.00.

The fourth edition of Dr. Greene's book has been so revised and enlarged that one might almost consider it an entirely new work. The systematic arrangement of the subject matter and its scholarly presentation are evidences of the author's vast experience and knowledge of his subject. In its 1300 pages the entire body and all its diseases are fully described and supplemented with numerous illustrations and colored plates. An unusually complete index makes the volume a valuable book of reference to the student and to the practitioner. It can be safely recommended as an exhaustive and modern treatise on medical diagnosis. W. B.

1917 COLLECTED PAPERS OF THE MAYO CLINIC, ROCHESTER, MINN. Octavo of 866 pages, 331 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$6.50 net.

This volume includes all the collected papers of the Mayo Clinic published in 1917. Most of the individual papers have appeared previously in various medical journals during the course of the year just prior to the publication of this volume. It forms a valuable addition to the library of any physician. One notes particularly in this volume an increasing number of papers from the various departments of the Mayo Clinic other than those of surgery. For instance, there are papers on "Auricular Flutter," "Paroxysmal Tachycardia of Ventricular Origin," together with many other subjects from the departments of pathology, internal medicine, and bacteriology. This gives the volume an ever-increasing interest for the profession at large. The text and illustrations are up to the usual high standard maintained in the preceding volumes. H. S. McK.

MODERN OPERATIVE BONE SURGERY, WITH SPECIAL REFERENCE TO THE TREATMENT OF FRACTURES. By Charles George Geiger, M.D. With 120 illustrations. Publishers, Philadelphia, F. A. Davis Company. English Depot: Stanley Phillips, London. 1918. Price, \$3.00.

This work, written to supply "the great demand for a comprehensive yet abridged book on plastic bone surgery," deals largely with the conditions in which bone transplantation is suitable. Consideration is given to the histology of chondrin, cartilage, periosteum and bone. The functions of the periosteum and repair of bone are discussed briefly, and one observes that the author has been greatly influenced by the teaching of Murphy in these subjects.

The well-known Geiger motor bone instruments are described in detail and much information is given as to the methods by which this motor and various appliances should be used.

The author states that only the autogenous bone transplant was considered because it is "the safe and sound procedure." Its use in fractures, both recent and un-united, is described in detail. Chapters are devoted to the use of autogenous transplants in orthopedic surgery, including clubfoot, spina bifida, and tuberculosis of the vertebrae.

There are 116 illustrations in the book, consisting chiefly of photographs and X-ray plates. The text is excellent. It is a book well worth having in one's library. H. S. McK.

# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

Volume XVI

CHICAGO, ILL., AND ST. LOUIS, MO., FEBRUARY, 1919

NUMBER 2

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### ORIGINAL ARTICLES

#### WHAT THE LABORATORY CAN AND CANNOT DO IN THE DIAGNOSIS OF TUBERCULOSIS\*

R. B. H. GRADWOHL, M.D.  
ST. LOUIS

In the two great scourges of humanity—the Great White Plague and the Great Red Plague—the rôle of the laboratory in diagnosis is most important. It is with the first of these that the present paper is concerned, yet we cannot dismiss the second without calling attention to the supreme import attached to the laboratory side of syphilis, the search for *Spirocheta pallida* in primary lesions, and the use of the Wassermann test in the blood of well-developed cases. The frequent combination of these two diseases makes it necessary to at least mention lies in this article, regardless of the fact that we shall discuss only the practical advantages which accrue from using the laboratory in cases of suspected tuberculosis.

In our consideration of tuberculosis, a few words should be said in a historical way, for we must remember that this pathological entity was not always known as such. Yet even though not known by its proper name at this time, it is a very old disease, for did not Elliot Smith and Armand Ruffer describe tuberculosis of the spinal column in Egyptian mummies? Hippocratic writings mention a disease which makes one think of pulmonary tuberculosis as we know it today. The term "tubercle" sprang up during the days of the anatomists of the seventeenth century. Franz de la Boe Sylvius alluded to the tubercle in connection with pulmonary tuberculosis as early as 1672. He described "vomicae" in the lungs at that time. Reid in 1785, and Baillie in 1793 described the lymphatic changes of phthisis. Bayle at the beginning of the nineteenth century suggested that

the local lesions found in pulmonary phthisis might be due to a general infection. Bayle later described the lesions in the lung as "grains," afterwards called miliary tubercles. Laennec, who lived from 1781 to 1826, deserves credit for our knowledge of the anatomical lesions of tuberculosis, inasmuch as he differentiated between local tubercles and diffuse infiltration. His later description following Bayle of tubercle formation was as follows: "petits grains gris et demi-transparent, quelquefois meme presque diaphanes et incolores; leur consistance est un peu moindre que celles des cartilages." Laennec later described a "granulation tuberculeuse," which corresponds to the second of the six varieties of phthisis of Bayle. Bayle's division of lesions was six: tuberculous phthisis, granulation phthisis, phthisis with melanosis, ulcerative phthisis, calculous phthisis and cancerous phthisis.

Pierre Louis at this time, too, thought of the tubercle as an inflammatory product. It was Virchow's work, however, about the middle of the nineteenth century, that finally crystallized our true conception of the anatomical lesions of this disease into their present form—namely, that the tubercle is the essential primary lesions of this disease. This was followed by Villemin's proof in 1865 of the communicability of the process from animal to animal by injection of tuberculous material into rabbits, and the consistent reproduction of the lesions of tuberculosis in the inoculated animals. Cohnheim and Salomensen further clinched this proof by using the anterior of the rabbit's eye as the procedure of choice in reproducing these lesions. It was in March, 1882, that Robert Koch finally wrote the last chapter upon the etiology of the disease by describing before the Physiological Society of Berlin his finding of a certain peculiarly staining bacillus which he found in tuberculous lesions of men, cattle, horses, sheep, hogs, chickens and apes, and his cultivation of this organism, and the successful reproduction of lesions of the disease by introduction of these bacilli into the bodies of susceptible animals. Ehrlich further described methods of

\* Read at the Sixty-First Annual Meeting of the Missouri State Medical Association, Jefferson City, May 6-8, 1918.

\* From the Gradwohl Biological Laboratories, St. Louis.



special staining. Since then innumerable workers have added additional findings, most notable of which was the description of our own Theobald Smith of the characteristics of the *typus bovinus* as distinguished from the *typus humanus* of the tubercle bacillus.

Accepting, therefore, the countless experiences of the workers of the past, our own generation has occupied itself in yeoman efforts to ameliorate the sufferings of patients with tuberculosis, to discover its early existence, and to enact measures looking toward a prevention of its spread. Education has accomplished much in this direction as all of you are quite well aware. The very essence of prevention and cure lies in the subject in hand—namely, the early diagnosis; and early diagnosis is largely dependent upon the laboratory. I take it that the laboratory refinements of diagnosis are so intimately bound up with the propaganda for stamping out tuberculosis that this subject is entitled to our most profound consideration and attention.

The laboratory diagnosis of tuberculosis may be classified as follows: (1) the direct search for the tubercle bacilli in the various products thrown out from tuberculous lesions, which are in communication with the outside world; (2) the direct search for organisms in material removed from the body by surgical incision; (3) the use of cultivation methods for isolation in pure culture of this ubiquitous parasite; (4) the inoculation into the bodies of susceptible animals of material thrown out by tuberculous subjects; (5) the cultivation of the organisms from lesions in animals so inoculated and dead of this disease; (6) the cultivation directly from the blood of the tubercle bacilli in individuals sick with the disease; (7) the use of biological tests or complement fixation methods with the blood of suspects, and lastly, the various reactions of allergy known as tuberculin reactions.

In what class of cases are these methods applicable, and how far do these methods supplement the ordinary methods of physical examination, including roentgenological research; in what proportion of cases if any do these methods serve to indelibly and undeniably prove the existence of the disease where all other methods fail to do so; lastly, in what class of cases, or under what conditions, do the other methods of the careful physician or phthisiologist suffice where the laboratory fails? This in the main might be termed the "acid test" that the laboratory must pass through in order to be classed as an aid to diagnosis. In establishing these facts we do not wish to impress anyone with the idea that the laboratory dominates the situation; rather, we intend to show that the laboratory is but the hand-maiden of the practitioner; that if used intelligently, it

will serve him in good stead, and if neglected, it will often leave him upon the reefs and amid the shoals of incorrect or doubtful diagnosis.

First, as to the examination of material by microscopic methods directly. We are all familiar with the fact that direct examination of the sputum of individuals suffering with tuberculosis of the respiratory tract is the favorite method of clinching this diagnosis. This sputum is gathered in an absolutely sterile dry container, after rejecting that expectorated immediately after breakfast in order to avoid food remains. Our usual procedure is to place the sputum in a flat Petri dish against a black surface, pick out the small purulent or caseous masses, rub them upon a slide and stain by the Ziehl method. Acid-fast red bacilli are usually considered tubercle bacilli. Another excellent method of staining is the old Ehrlich method of anilin-oil-methyl violet; another is the Much modification of the Gram method, made as follows: Twenty-four hours at 37° in the incubator in this solution—10 c.c. concentrated alcoholic solution of methyl violet in 100 c.c. of 2 per cent. watery, filtered carbolic acid solution; Lugol solution one to five minutes; 5 per cent. nitric acid one minute; 3 per cent. hydrochloric acid ten seconds; differentiate in equal parts of acetone and alcohol. Another modification of the Much method by Wehrli and Knoll is as follows: Mix equal parts of the Much methyl violet solution and carbolfuchsin, filter, stain two or three minutes with heat until it steams, Lugol ten minutes, differentiate in 1 per cent. hydrochloric acid, alcohol (70 per cent.) until the blue color begins to show reddening from the fuchsin present, dip in absolute alcohol repeatedly, observing the specimen under the microscope to prevent too much decolorization.

There are several points to be remembered in connection with the direct microscopic diagnosis of the tubercle bacillus in sputum, as well as from urine, blood, etc. First, it must be remembered that not all acid-fast organisms are tubercle bacilli. There are two organisms which must be differentiated from the tubercle bacillus—namely, the lepra and the smegma bacillus, both of which are acid-fast. The lepra bacillus comes from the nasal secretions of leprosy patients, but this disease is so uncommon among us, that its importance in this connection is not great. Not so with the smegma bacillus, however, as it has been known to occur not only upon the external genitalia, but also upon the tonsils, tongue and tartar of teeth of healthy individuals. Direct culture and animal inoculation, as we shall later describe, may be necessary in order to make this exact differentiation. It has also been repeatedly shown that ordinary water and even distilled water may occasionally show an acid-fast red bacillus under these stain-



ing methods, which is not the tubercle bacillus. Therefore, one cannot be too careful in avoiding any contamination of the sputum even by distilled water. The receptacles should be perfectly dry when you are collecting the sputum; preferably the sputum ought to be caught in a sterile, clean, dry Petri dish. Another point not to be lost sight of is the fact that in a given specimen of sputum the number of tubercle bacilli present may be so scant that even examination of several specimens may fail to reveal them. In order to concentrate, as it were, the deposit of tubercle bacilli in a given specimen of sputum, the writer has had signal success, first, by subjecting all sputa to vigorous shaking in an electric shaking machine, or by treatment with antiformin, or a similar preparation. Antiformin is a trade name for a preparation of eau de Javelle, or a combination of sodium hydrate with sodium hypochlorite. This dissolves out the tubercle bacilli from the remainder of the tenacious substance of the sputum. Mix equal parts of sputum and water with enough antiformin to make a 10 per cent. solution, shake by hand, or in the electric shaker, centrifuge, and examine the sediment. This sediment will yield all the tubercle bacilli that are present in the given specimen. A still better method by Loeffler is as follows: Mix equal parts of sputum and 50 per cent. antiformin in a Jena Ehrenmeyer flask, and heat over a flame. To each 10 c.c. of the mixture add 1.5 c.c. of a mixture of 10 volumes of chloroform with 90 volumes of alcohol. After shaking in shaking-machine, or vigorously by hand, centrifuge for fifteen minutes. A sediment is seen in the pointed end of the centrifuge tube; all supernatant fluid is poured off; the sediment thrown directly on a glass slide; the fluid portion of the sediment taken up with a piece of filter paper; a drop of egg albumin added; rubbed with another slide to make two preparations; dried in the air; fixed in the flame; stained with carbolfuchsin with heat; decolorized with 3 per cent. hydrochloric acid in alcohol; washed in water; counterstained with 0.1 per cent. watery malachite green solution.

In addition to the direct examination of sputum for tubercle bacilli, Petroff has worked out a method of direct cultivation of tubercle bacilli from sputum that may be used as a diagnostic measure in cases where all these methods of search just described have failed. This method often gives one a pure culture of the tubercle bacilli where the most painstaking direct search has failed to reveal them. At the same time it serves to differentiate the tubercle bacillus from all other acid-fast organisms that confuse and confound the laboratory diagnostician. This method of direct cultivation of tubercle bacilli from sputum depends upon the fact that the addition of a solution of gentian violet in the

proportion of 1 to 10,000 to a suitable culture medium for tubercle bacilli prevents the growth of all other organisms. Petroff took his cue from the work of the botanist Pfeiffer, who in 1886 demonstrated the harmful effect of aniline dyes upon higher plants. Cronil, Babes, Penzoldt, Stilling and Churchman repeated this observation, although Petroff alone seemed to see in this interesting phenomenon a practical way of isolating bacteria in pure culture. He found that the addition of alkali to sputum inhibited the growth of certain common contaminating organisms, and at the same time failed to arrest the growth of the tubercle bacilli. From these researches he devised the following practical method of direct cultivation of the tubercle bacillus: The medium is made as follows: One part meat juice, two parts egg, gentian violet to make 1 to 10,000.

1. Meat juice. Five hundred grams of beef or veal are infused in 500 c.c. of a 15 per cent. solution of glycerin in water. Twenty-four hours later the meat is squeezed in a sterile press and the infusion collected in a sterile beaker.

2. Eggs. Sterilize the shells of the eggs by immersion for ten minutes in 70 per cent. alcohol, or by pouring hot water upon them. Break the eggs into a sterile beaker and after mixing well, filter through sterile gauze. Add one part by volume of meat juice to two parts egg.

3. Gentian violet. Add sufficient 1 per cent. alcoholic solution of gentian violet to make a preparation of 1 to 10,000. It has been the writer's experience that the gentian violet goes into solution best if it is added *directly* to the *meat juice*, which is then mixed with the egg mixture. After mixing well for a few minutes, the medium is tubed as usual, and inspissated for three successive days — first at 85° C., until it is well solidified; and on the second and third days for one hour at 75° C.

To isolate the tubercle bacillus from sputum by the Petroff method, fresh sputum should be used. Equal parts of sputum and 3 per cent. sodium hydroxid are shaken well and incubated at 38° C. for from fifteen to thirty minutes, the time of incubation depending upon the consistency of the sputum. The mixture is then neutralized to litmus paper with hydrochloric acid, and centrifuged at high speed for ten minutes; the supernatant fluid is decanted, and the sediment inoculated into the medium just described. After several days' incubation, with partial drying out of the medium, the tubes should be removed, the cotton plugs paraffined, and returned to the incubator. In variable periods of time a faint growth appears, which gradually assumes the typical dry, scaly appearance of growing tubercle bacilli. Some of the tubes become contaminated and are to be rejected, but as a rule, one succeeds in getting cultures of the

tubercle bacilli in most cases by this method without many failures. Sometimes as long a period of incubation as two weeks is necessary before we see a growth; usually, however, one gets a culture within a week or ten days. This method, therefore, serves, first, as a means of making a laboratory diagnosis of pulmonary tuberculosis where direct examinations may fail; secondly, it serves to prove whether or not a given acid-fast red bacillus is the tubercle bacillus or some other organism, such as the smegma, the lepra, or butter bacillus of Rabinowitsch.

Another phase of sputum examinations which must be mentioned here, is the estimation of the albumin content and the lymphocyte count in cases of suspected tuberculosis of the lungs in which might be called the "pre-bacillary" stage. Some workers have attempted to use these estimations in conjunction with the clinical examination, with greater or less success. From a prognostic standpoint, little aid has come from a study of sputum, to quote the words of Pottenger in an address in 1917 before the National Association for the Study and Prevention of Tuberculosis. He claims, however, that by a method of his own, he has been able to establish a fairly satisfactory prognostic picture in advanced tuberculosis, to-wit: by correlation of the various findings in the one day, two day or three day sputa. He measures the sediment volume, which is a measurement of the cellular elements of sputum; the number of bacilli is expressed by the product of the number per field by the number of cubic centimeters of sediment volume; the length index of tubercle bacilli is a number expressing the relative length of the bacilli; and the albumin content is expressed by multiplying the denominator of the fraction representing the dilution, by the total number of cubic centimeters of sputum; i. e., in a sputum of 50 c.c., which gives the standard reaction in  $\frac{1}{20}$  dilution, the relative albumin content would be expressed by  $\frac{1}{20} \times \frac{1}{50}$ , or  $\frac{1}{1000}$ . In uncomplicated tuberculosis, Pottenger contends that the sediment volume and the length index are important determinations—the former expressing the extent, and the latter the degree of activity of the process. With the entrance of complications, the relative number of bacilli is an important aid, as in pulmonary abscess, when the sediment volume increases appreciably, and the number of bacilli remain constant, or actually diminish. If tuberculous laryngitis develops, the total amount of sputum increases, while the sediment volume, number of bacilli and the length index remain unchanged, unless cavitation in the lung takes place at the same time. Any hypersecretion of bronchial or laryngeal mucosa may be differentiated from cavitation by determination of the sediment volume. Increase in sediment

volume due to epithelium in catarrhal conditions is so slight as to be almost negligible in comparison with the volume of pus cells from a cavity. One rarely finds a sediment volume of epithelium greater than  $\frac{5}{10}$  c.c.; while the volume of leukocytes ranges usually from 1 c.c. to 5 c.c. in moderately advanced cases; from 5 to 10 c.c. in far advanced cases, and 25 c.c. or more in lung abscess. Pottenger believes that the albumin content estimation corresponds to the sediment volume, and that in itself, its estimation has but little value. This seems to be the opinion of the majority of workers.

The further proof of the tubercle bacillus, if more should be required, would be the inoculation of the growth from the Petroff medium into the bodies of susceptible animals, such as guinea-pigs. In general, it can be concluded that the search for the presence of the tubercle bacillus in sputum as an aid to the diagnosis of tuberculosis pulmonalis is extremely valuable. Just what bearing the appearance of the tubercle bacillus in the sputum has upon the pathological condition of the respiratory tract is open to discussion. We know that the "open" case may be an incipient one, and also that the "closed" case may be moderately advanced. After all, the diagnosis made by sputum examination is only corroborative of a careful physical and roentgenological inquiry. There may be signs of early lung involvement, which the physical examiner may make out, together with the demonstration of a parenchymatous pulmonary lesion by roentgen ray, or a peribronchial infiltration of tubercular nature, and still the sputum examination for tubercle bacilli may be negative. All these points, therefore, must be studied as a whole and not separately. I shall speak later of the value of the blood test for tuberculosis in cases that show no tubercle bacilli as well as in those that show them.

A word or two concerning the physical appearance of sputum as indicative of tuberculosis. While blood-streaked sputum is suggestive of a possible hemoptysis of tuberculous origin, blood may come from other sources and, therefore, *per se*, must not be taken as positive evidence of pulmonary tuberculosis. Again, the thickness and tenacity of sputum does not necessarily identify it as tuberculous material. The writer has seen sputum that was mucoid, in fact, almost watery, containing myriads of tubercle bacilli; and vice versa, thick, ropy sputum with purulent characteristics, with no tubercle bacilli present. The microscopic picture after all is the only reliable method of coming to a conclusion, and this, too, has its limitations.

A very interesting part of the laboratory diagnosis of tuberculosis with which the writer has had a very extended experience, is that which deals with urogenital tuberculosis. The modern urologist is keenly alive to the common



occurrence of urogenital tuberculosis. By means of the cystoscope and the ureter catheter, many of these cases are recognized early. With appropriate laboratory help, the diagnosis may be verified, surgical operation performed, and the patient tided over or relieved of his local tuberculosis. The technic of diagnosis of tuberculosis of the kidney may well be considered. This makes itself manifest usually by the appearance of pyuria, in addition to other symptoms. By means of the cystoscope and ureter catheters, the clinician may find that he has a purulent urine from one kidney, and a clear urine from the other. The urines are carefully collected in sterile containers, sedimented, and searched for tubercle bacilli and other organisms. As a rule, no tubercle bacilli are found in the sediment. The next step is the injection of the sediment into the favorite animal for inoculation—the guinea-pig. Several pigs are injected, using the inguinal gland in one, the peritoneal route in the other. We then wait for the appearance of tuberculosis in these animals, manifested by loss in weight and death. There is a general belief that tuberculosis appears in guinea-pigs within a few weeks after inoculation. This is a fallacy. Very often it takes from six to sixteen weeks for tuberculosis to develop in pigs. It is therefore a mistake to wait for these pigs to die of tuberculosis. It is equally a mistake to kill these pigs too quickly before they have had time to develop certain unmistakable lesions. Our policy is to keep the pigs under observation for about three weeks. We usually inoculate three animals. At the end of three weeks one of the animals is anesthetized and examined. We look for lesions particularly in the spleen and liver. They are pretty well advanced at the end of three weeks. If the first pig shows nothing, the second pig is killed in the following week and examined. If this pig shows a negative condition, then the third pig is kept for about six weeks and then examined. We believe that material that fails to produce lesions in a pig within six weeks is free from tubercle bacilli. A fourth pig is usually carried along as a control. Another advantage of carrying out the test on three animals is the fact that one or two may die of some intercurrent infection. This is particularly true when the peritoneal route is used for inoculation, as these pigs sometimes develop an acute peritonitis and die before the tubercular infection can take hold.

The search for tubercle bacilli in cases of renal tuberculosis is, therefore, best carried out by means of the pig test. It is remarkable to note that many of these cases show very scant elimination of tubercle bacilli in the urine. The direct search for tubercle bacilli in urine is very often doomed to failure, but a failure under these conditions means nothing. Again, attention must be called to the presence of pseudo-

tubercle bacilli, or acid fast organisms, such as the smegma bacillus, which would confuse the inexperienced worker. By all means the urine for direct search must be taken per catheter after thorough cleansing of the external genitals. A most interesting experience which we later encountered in a case of unilateral renal tuberculosis was the fact that repeated examinations of separate urines taken from the infected kidney by ureter catheterization failed to show any tubercle bacilli by direct search. Inoculation of a series of pigs showed tuberculosis. The blood test for tuberculosis to be mentioned later was positive. In fact, this was the first and only positive finding in the beginning of our investigation. The kidney was removed and found to be riddled with tuberculous cavities. Repeated search of the pus direct from the cavities showed tubercle bacilli only after a dozen slides were stained and examined. The inference is therefore clear, that if with the infected kidney, as it were, under our direct eye, it was well nigh impossible to make the diagnosis by direct examination of smears, what chance was there of doing it from voided urine containing but a relatively small amount of detritus-bearing bacilli from the cavities?

Before leaving the subject of urogenital tuberculosis, it might be well to state that the use of the Petroff method of direct cultivation of tubercle bacilli from urine is quite feasible and often very successful. In addition to this, we have the opportunity of making a complement fixation test of the blood, which, while it might show positively, does not localize the disease in the kidney.

Tuberculosis of the pleural sac and the meninges, and its laboratory diagnosis.—Pleuritic fluid is often of tuberculous origin. The direct search for tubercle bacilli in serous fluids from tuberculous individuals is usually a waste of time. The microscopic examination of stained smears of sediment usually shows a predominant lymphocytosis in these fluids and not a granulocytosis. In fact, the presence of a marked granulocytosis may justly rule out tuberculosis as a rule. To clinch the diagnosis, the animal test and the Petroff culture method are recommended. This applies to effusions of all kinds, especially to joint effusions in suspected tuberculosis of joint structures, and to spinal fluid examinations as well. In some recent experiences with tuberculosis of joints, and the use of guinea-pigs as the method of choice in making the laboratory diagnosis, we saw pigs develop tuberculosis as late as four months after inoculation with material drawn from the knee joints.

So far as the laboratory diagnosis of tuberculosis of the digestive tract is concerned, we must remember that these cases in adults are exceedingly common in patients sick with



tuberculosis of the lungs. Therefore, the beginning of a diarrheal process in a pulmonary tuberculosis patient should warn us of an impending gastro-intestinal complication. Primary tuberculosis of the intestine is rare; secondary infection from swallowing of tubercle bacilli in infected sputum is common, and is seen in approximately 50 per cent. of patients with pulmonary infection. The *Bacillus tuberculosis* is not destroyed by gastric juice. The examination of feces in intestinal tuberculosis shows blood with a stool characteristic of catarrhal inflammatory conditions of the small and large intestines. Pus and blood together are suspicious symptoms, both of which can be discovered by microscopic tests, as well as by the benzidine test for blood. The tubercle bacillus may often be readily demonstrable in the feces by the Ziehl method of staining, and also by cultivation, using the special method for feces by Petroff: collect morning stool, dilute with three volumes of water, mix, strain through gauze to remove solid particles, saturate filtrate with sodium chloride for half hour, at the end of which time all bacteria will be found floating. Collect this floating film in a spoon, and dissolve it in equal parts of normal sodium hydroxid, leave in incubator three hours. Shake every half hour, neutralize with normal hydrochloric acid, centrifugalize, and inoculate sediment on special Petroff media.

We must not forget that tubercle bacilli may be swallowed by pulmonary subjects, and passed out in the stool without actually having immediately produced intestinal tuberculosis, so that their mere presence in stools, without other organic changes, does not necessarily prove an intestinal complication.

**Blood Cultures.**—The search for tubercle bacilli in the circulating blood as a laboratory method of diagnosis is mentioned only because of the occasional references which have appeared in the literature regarding the frequency of tubercle bacilli in blood. Most of these reports are erroneous, the reporters having made the mistake of contaminating their specimens with water containing acid-fast bacilli which were not tubercle bacilli. In a few cases of acute miliary tuberculosis, competent workers have actually obtained cultures, but as a practical procedure, blood cultures for tuberculosis are of no importance.

The diagnosis of tuberculosis by means of sections of tissue offers a favorite method in certain conditions. This is particularly true where one wishes to confirm the naked eye appearance of the lesions produced in the experimental animal. From these lesions it is necessary to obtain cultures; and secondly, to make out by microscopic methods the pathologic histology of the tuberculous process. The manner of reculturing the tubercle bacillus

from lesions in experimental animals is to take a piece of the infected spleen between the blades of sterile forceps, crush the tissue, and then rub it over the surfaces of culture tubes of glycerin agar, or the egg medium of Dorset. We will not go into the classical description of the appearance of tuberculous lesions in sections. The basic element is the tubercle formation, with giant cells, epithelioid cells and round cells, with the presence of acid-fast bacilli in the tubercle. Of course, all varieties of tuberculous tissue may be subjected to section and pathologic histologic diagnosis.

We have purposely left for the last the discussion of the laboratory diagnosis by the complement fixation test of the blood, about which so much has been written in the last two or three years. Strange as it may seem, this method of utilization of complement fixation was tried even before Wassermann tried the antigen-antibody adjunct to the hemolytic system in the diagnosis of syphilis in 1906. It apparently did not attract much attention, possibly due to the widespread interest that was aroused by Wassermann and his co-workers in respect to the diagnosis of syphilis by complement fixation. In the past three or four years, however, renewed interest in this work was aroused by the work and publications of Besredka, Craig, Miller and Zinsser, Bronfenbrenner, Petroff, Corper and others. As a result of these investigators' efforts, it seems conservative to state at this time, that by complement fixation we are able to detect in the blood sera of tuberculous persons a reaction, which is absolutely specific, i. e., it is present in no other disease. It is not, however, present in all cases of tuberculosis, nor in all stages of the disease in the same individual or group of individuals. It is detected by obtaining a specimen of blood in much the same manner that we look for the Wassermann reaction in syphilitics, by vein puncture, by separation of the serum from the clot, by inactivation of the serum, and by treating it with definite quantities of antigen made from tubercle bacilli, and the hemolytic system, i. e., amboceptor, complement, and animal cells of the same species as are used in making the amboceptor. The antigenic extract of the tuberculosis complement fixation test is made in various ways by the various workers. The most notable extracts which have been advocated are those of Besredka, Miller, Craig and Petroff. The writer has made numerous tests using all of the antigens, and has met with most success with the Miller antigen, and here of late with the soda extract antigen of Petroff, which gives a higher percentage of positives than any other preparation that he has yet tried out. All in all, it can be stated that the very last word with respect to the proper method of making antigens for this test has not yet been

spoken, and it is for this reason, in a measure, that many tuberculous subjects with active lesions fail to show a positive reaction. Two ideal conditions must exist in order to obtain a uniformly 100 per cent. positive reaction by complement fixation: first, an absolutely true and concentrated antigenic preparation; secondly, the constant appearance and presence in the blood serum of the tuberculosis antibody or substance, which binds complement in the presence of the aforesaid perfect or ideal antigen. It may be possible that we may control the making of antigen, and turn out what might be termed an "ideal" preparation. There is no likelihood, however, of our ever being able to constantly control the presence of antibody or even to influence it in any manner. That after all is a sign of bodily resistance or interaction between the body and the foreign bacterial organisms, and hence is an unknown quantity. There seems to be every reason to believe that the complement fixation test as it now exists is positive in a number of cases of tuberculosis; that it therefore constitutes an important laboratory test for tuberculosis. It is present more often in the earlier stages of tuberculosis than in the later, according to the writer's experience. It may appear and disappear in the blood of a given tuberculous subject quite independent of the clinical course of the case. At this time, therefore, we do not believe that its absence can be taken to mean a disappearance of tuberculous activity. It may be absent even when tubercle bacilli are present in the sputum. Indeed, this often occurs. It is manifestly not needed as a diagnostic measure when the tubercle bacilli are recoverable from sputum. Quoting from a paper by Lawrason Brown and S. A. Petroff of the Saranac Lake, before the last meeting of the American Sanatorium Association, they state that "on admission 51 per cent. of all incipient cases, and 80 per cent. of all moderately advanced cases had complement fixation; that in their incipient cases on admission complement fixation was one and a half times more likely to occur in cases with clinical activity than in cases without clinical activity; in their moderately advanced cases on admission, complement fixation was five times more likely to occur in cases with clinical activity than in those without clinical activity; that in incipient and moderately advanced cases, a positive complement fixation was more likely to occur in those with tubercle bacilli present at some time than in closed cases (three to two); that in the moderately advanced cases, more cases with the negative complement fixation on admission became positive on discharge than took place among the incipient. When clinical activity was present, the incipient case was approximately twice as likely to lose its positive complement fixation as the moderately advanced

case. When clinical activity was absent, the incipient case stood a slightly better chance of losing a positive complement fixation than the moderately advanced. Of their incipient cases referred to, 50 per cent. were clinically active; and of their moderately advanced cases, 69 per cent. were clinically active. Again, only 50 per cent. of their incipients showed a parenchymatous roentgen-ray lesion; whereas, 90 per cent. of their moderately advanced cases showed it. It must be remembered that Brown and Petroff are in an exceptionally excellent position to draw conclusions from work on complement fixation, as one can well understand who knows the character of the cases treated at the Adirondack Sanatorium, the laboratory facilities enjoyed there and the earnest scientific spirit of this institution, and the scientific ability of these two workers. The writer's observations have covered but two years on this work, but with the promise of a special opportunity to collaborate this summer with Petroff at his laboratory in the Adirondacks, he hopes that next year he will be able to report more definitely on some aspects of this test that have not yet been considered—namely, the use of unheated sera, and the influence of natural anti-sheep antioceptor and complement on the results.

The test so far has been of extreme value when positive in our hands in cases of incipient pulmonary tuberculosis, often before marked physical signs were apparent; in cases of renal tuberculosis, and in a few cases of joint and glandular infection. Owing to the uncertainty of the manner of action of the one or other kind of antigen, we have as a routine carried out all our work with five antigens, at the present time with six. These are: the Miller antigen, and three antigens made by Petroff, to whom we acknowledge our thanks for having prepared most of these for our use; and two antigens made by the writer. We get positives at times with only one or two of these; sometimes but rarely with all six; sometimes with three, four or five. All in all, with all fairness to the various antigens, we believe that the last soda extract made by Petroff is giving us the maximum amount of true positives.

*Tuberculin Tests.*—We hardly feel justified in discussing the tuberculin tests, as some may question that these are laboratory procedures. As a matter of fact, these tests properly belong to the domain of the clinical worker, although the laboratory worker is frequently called upon to make them. These tests are, briefly, the von Pirquet skin test, the *Stichreaktion* of Escherich, the conjunctival reaction of Wolff-Eisner and Calmette, the cutaneous reaction of Moro, the intracutaneous test of Mantoux, and the subcutaneous tuberculin test. The skin test of von Pirquet is especially applicable in tuberculosis



of infants and children; the reaction of Calmette is not employed owing to the danger to the eye; the Moro test has practically been abandoned. A very recent report by M. H. Bass, in *The American Journal of Diseases of Children*, May, 1918, gives some very important information about these tests in children. First, he shows that the von Pirquet test is frequently absent, and then reappears on making the test within a few days. Consequently, one negative von Pirquet means no more than one negative complement fixation test; it must be repeated. Again, he shows that the test of Mantoux and Roux, which is a modification of the *Stichreaktion* of Escherich, is even better than the von Pirquet, because one uses an exact dosage, and the test is more delicate. A 1 to 5,000 solution of tuberculin in normal saline solution is injected, one drop, or 0.01 mg. directly into the skin by means of a fine needle, until a wheal appears, much in the manner in which we make the luetin test of Noguchi. A positive reaction appears as an infiltration surrounded by a red areola, attaining its maximum in forty-eight hours. Bass disagrees with the previous report of Veeder and Johnston that the intradermic tuberculin test has given but a slight increase of positive reactions over the percentage of positive cutaneous reactions. Bass claims that where the von Pirquet test alone was used, he obtained a positive in only twenty-one cases, but obtained thirty-one additional positives with the intradermic method. We shall leave further discussion of the value and interpretation of the tuberculin reactions to the practical clinical workers.

To recapitulate, the laboratory can aid the clinician in his diagnosis of tuberculosis of the upper respiratory tract, skin, joints, serous cavities, bones, digestive and genito-urinary system by means of the microscopic identification of the tubercle bacilli in sputum; its rare demonstration in pleuritic fluid, joint fluids, spinal fluid; its frequent demonstration in pus and discharges from the intestine; its occasional demonstration in the urine; better by animal inoculation in all but the pulmonary cases; by cultivation directly from sputum, and other tuberculous discharges from all points of infection by the Petroff method; by subcultures from lesions in inoculated animals; by blood cultures in the less common forms of acute miliary tuberculosis, and by complement fixation tests in tuberculosis anywhere in the body; likewise by tuberculin reactions of all classes of infection. Closed cavities preclude microscopic study of secretions; inactivity or absence of antibody yields negative complement fixation results; these must be repeated just as we repeat the Wassermann test in syphilis. We are not ready to advocate this complement fixation

test as a means of proving an arrest of a tuberculous process. We know too little of the biological processes that are under way in this infection to draw conclusions of that kind. The sum and substance of the whole case is, the laboratory is strikingly useful in the diagnosis of tuberculosis; that its usefulness is in direct proportion to the industry and intelligence of the clinician who uses it. In other words, it will serve the physician well who knows how to run down the focus when he has positive findings, and who knows how to weigh in the balance the negative results, that are inevitable in all specific microbic conditions at certain times and under certain conditions. Exult when your clinical findings are confirmed by positive laboratory results; but do not be depressed when you cannot at once obtain such corroboration; and what is more, do not condemn the apparent shortcomings of the laboratory because of biological or mechanical factors over which this much-abused institution has no control.

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#### DISCUSSION

DR. J. J. SINGER, St. Louis: Dr. Clark asked for some way to diagnose tuberculosis. He ought to ask the patient what is the matter and let him tell. Ask whether he has lost weight, whether he has a little temperature, or a cough, night sweats occasionally or is run down. The doctor has 85 per cent. of the diagnosis made for him if he will ask the patient. When I say Dr. Clark I mean the general practitioner. The other 15 per cent. is for us who are working at this work to dig out, and that is really the most difficult part. The laboratory is an important part, but by no means the most important part. We are just beginning to realize that early diagnosis of tuberculosis, not necessarily early in the disease, but early after we see the patient, is our prime duty, because we know that a great many cases who have very definite signs to us, are either incipient or not even present to the uninitiated. The patient must make the diagnosis both in history and by his physical signs. The doctor does not make the physical signs, he finds them in the patient. He listens to hear if the patient has hard breath sounds, if he has râles, or impaired resonance, to see if he is emaciated, etc. The three methods by which a definite diagnosis is made have been mentioned before, history of the patient, physical examination and laboratory examination. No one of these three will stand alone. The symptoms and history are the easy things upon which you make most diagnoses. The question of examination of sputum is a very simple matter and takes but a few moments, but unfortunately a large percentage of cases do not show any tubercle bacilli by the methods we have at present. The object of the sputum examination is to show whether acid-fast bacilli be present; and if we find a history of tuberculosis and have the physical signs, the acid-fast bacillus is practically conclusive.

The question of tuberculin is a very important one, but I believe really comes under the head of laboratory examination. After the injection of tuberculin in some form there is a certain definite reaction in people who have certain substances in their body. The percentage of positive cases according to the tuberculin test does not at all signify the amount of tuberculosis present in the community, because the different statistics we get vary from 40 to 100 per



cent., depending upon the substance used and also upon the method. In experimenting at Washington University, Dr. Opie and I made about fifty injections intercutaneously, irrespective of what disease they came for, and everyone reacted.

Another important point is: let us assume the laboratory has given a report, "sputum positive." What then? That is merely a diagnosis. The diagnosis is the same as saying that a man has money. He may have a cent or a million. A man may have slight tuberculosis, advanced tuberculosis or he may have active tuberculosis today and he may not have any tomorrow. It is the detailed examination of these cases that gives us the true condition, what is going on, and that is really in the land of the specialist. The early diagnosis and the easy diagnosis I believe is readily made.

DR. H. M. CLARK, Platt City: I do not want to be misunderstood in this line because I have the greatest respect for the laboratory. I think it is very important. What I was trying to bring out was that for a disease as prominent as this we ought to have a very common method of making diagnosis. Every man whether he has practiced five or ten or twenty-five years has at some time in his life had cause to think of tuberculosis and would like to have some method that would point definitely one way or the other. We do hit it more than 50 per cent. of the time, but with a disease which affects one out of seven surely we ought to hit it more than one-half of the time if we only guessed at it, but I do not believe we can with our present methods of diagnosis. Take pneumonia, the country doctor knows it is pneumonia; he does not have to send the case to a specialist. He knows it is pneumonia. We ought to have some such method as that for tuberculosis.

DR. D. F. LUCKEY, State Veterinarian, Jefferson City: I have been greatly interested in the papers on the subject of tuberculosis. I am here seeking further light on this great subject.

It is my duty, as State Veterinarian, to superintend the work of keeping our animals free from contagious diseases. Tuberculosis is quite prevalent among cattle and hogs of this and all other states. During the past year the farmers of the United States raised and fattened thirty trainloads of cattle and twenty-four trainloads of hogs, which upon inspection by the Federal Bureau of Animal Industry at time of slaughter, were found to be extensively affected with tuberculosis and unfit for food. The carcasses of these fifty-four trainloads of food animals were dumped into rendering tanks and made into grease and fertilizer. The loss was prorated among the live stock producers of this country. It was estimated that the deduction amounts to about ten cents per hundred on the price of hogs. Every farmer who markets a fat hog or steer pays his part of this immense loss.

In our tuberculosis eradication work we have used the intradermal test on approximately 150,000 cattle. With this test we have condemned as high as one thousand head of cattle per year. Our post mortem reports and subsequent retests on herds, from which diseased animals have been removed, indicate beyond a question of doubt that the intradermal test is the most accurate one. It is also far more convenient than any other effective test.

I am very much interested at the present time in the possibility of immunizing calves against tuberculosis, and thereby avoiding the necessity of slaughtering tuberculous cows. My theory of immunization is to infect the calves by the administration of a virulent culture of tubercle bacilli, giving this culture subcutaneously, intravenously or administering it through the digestive tract. In a limited way I have demonstrated positively that the injection of tuberculosis

bacterin following the administration of the virulent culture overcomes all of the infection. I have not determined the extent nor the duration of the immunity resulting therefrom, but I have reasons to believe that this treatment will produce an immunity that will cause an animal thereafter to resist all natural infection.

I am beginning the application of this method in connection with tuberculous herds of cattle. I have on one farm over forty head of tuberculous cows and heifers. The treatment has been applied to calves born since Jan. 1, 1918. These calves are running with and nursing their tuberculous dams. One by one these calves will naturally become infected with tuberculosis. As we can not know just when any one calf becomes infected, it is necessary to administer the curative treatment at regular intervals to all of them. The idea is to make sure that the bacterin is administered often enough to any calf that may become infected at any time to effect a cure. Of course, this treatment has no effect, whatever, upon any calf that does not become infected during the nursing period. Any calf which becomes infected is supposed to be completely cured, and this amounts to vaccination. All we can claim in this case is that the calves at weaning time can be removed in a healthy condition from their tuberculous dams.

Heretofore the Bang system has been put into practice more or less in raising the calves of tuberculous cows. In this system the calf must be removed immediately after birth from its dam and either raised upon a healthy nurse cow or the milk of the dam must be drawn and pasteurized and then fed to the calf.

I hope to develop this process so that we can avoid the necessity of slaughtering tuberculous cattle and putting the state and nation to the expense of paying indemnity to the owners. If all of the tuberculous cattle in the United States were condemned and slaughtered, there would be a near meat and milk famine. The state and federal indemnity would amount to an enormous sum. I have estimated that it would require \$40,000,000 indemnity money to pay the cost in the state of New York alone if all of the tuberculous cattle were slaughtered and paid for at one-half the rate provided by the laws of that state. I hope, through this process of immunizing cattle against tuberculosis, to avoid the necessity of the slaughter of cattle, especially valuable breeding animals, and conserve all of this stock. Furthermore, we may reasonably expect to avoid the necessity of the payment of enormous sums by the state and federal government as indemnity to the owners of culin alone, or by the injection of live bacilli?

DR. L. C. BOISLINIERE: Did I understand the State Veterinarian to say that in his treatment he would expect to produce this immunity by the use of tuberculin alone, or by the injection of live bacilli?

DR. LUCKEY: I inject the healthy calf with the live bacilli. Soon thereafter I treat this calf with tuberculosis bacterin, thereby completely overcoming the infection and producing a true vaccination.

DR. R. B. H. GRADWOHL, St. Louis: It seems that in this matter of diagnosis of tuberculosis neither the laboratory nor the attending physician is very much worried about difficulty of the diagnosis of cases of advanced tuberculosis.

Dr. Clark should remember that there is no royal road to diagnosis and there never will be possible any quick method of diagnosis of this disease at the first glance. After all, the greatest usefulness of the physician is in preventing the advance or spread of a given case; therefore, diagnose it at the earliest possible moment, and there I think the laboratory is at times a valuable aid if properly used and interpreted.

## MYOSITIS OSSIFICANS TRAUMATICA\*

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Various terms have been applied to the condition in which there is an intramuscular ossification following trauma. Myositis ossificans traumatica is probably the most common. Others, such as myositis ossificans circumscripta, traumatic intramuscular ossification, traumatic myostoma, periosteal callus, chronic productive osteitis and myopathia chronica osteoplastica have been applied by different writers on the subject. The reason for this varied terminology is due to the lack of definite knowledge of the etiology and pathology of the condition.

This type of ossification in muscle is to be distinguished from myositis ossificans progressiva, which is a disease of early life, originating commonly in the muscles of the back and eventually producing death by respiratory failure. Continued slight trauma over long periods of time may produce ossification in intramuscular or tendon tissue. Examples of this are "rider's bone," an osseous formation in the adductor group of thigh muscles, and the "drill bone" in the deltoid muscle at its insertion. Similar ossification has also been noted in the calf muscles of cavalymen, in the pectoral muscles of soldiers from the kicking of their guns, and in the heels of dancers. Myositis ossificans here to be considered is characterized by ossification in muscular tissue following a single severe trauma.

This condition occurs most frequently in adult males during the age of greatest activity. It has been suggested that it occurs more frequently in strong, muscular individuals, but this is probably only true because this class is more physically active.

The exact etiology is unknown. The predisposing cause is a severe subcutaneous trauma involving the muscle tissue. A discussion of the causation of the disease has formed a large portion of the literature written on the subject. Among the theories that have been considered are the tumor, hemic, aberrant sesamoids, aberrant embryonic cells, synovial fluid, trophoneurotic, periosteal, inflammatory, metaplasia of intramuscular connective tissue, and individual predisposition.

The theory that the ossification is a true tumor formation receives, at present, very little support. The hemic theory, which holds that the blood extravasated at the time of injury becomes transformed into bone is no longer tenable. The suggestion that aberrant sesamoid

bones may be a cause has no foundation. The aberrant embryonic cell theory, based on Conheim's theory of tumor formation, is now hardly considered a possibility. Some one has suggested that the synovial fluid might be a causative factor, especially in those cases in which the ossification is near the joint where there is a possibility of the joint cavity having been opened by the injury. This is looked on as rather a far-fetched explanation. That the condition is caused by some change produced directly or indirectly by the nervous system is not at all likely, in spite of the fact that cases have been described associated with Charcot joints. Detached periosteum and dissemination of osteoblastic cells, metaplasia of tissues and reaction following inflammation are the theories that have received most attention. Experimentally, detached portions of bone and periosteum in the muscle tissue will produce bone, but to an extent very slightly beyond the original size of the misplaced bone. The periosteum is considered more of a limiting membrane than an osteogenetic structure. The osteoblasts, especially in adult life, are probably situated beneath this bone covering. Morley<sup>1</sup> states his view of intramuscular ossification as follows: "A severe blunt injury at once subcutaneously strips off and destroys the periosteum and crushes the muscles in contact with the bone. Bleeding occurs from the surface of the denuded bone, and, with the blood, osteoblasts, in a free and possibly ameboid condition, escape into the pulped muscle tissue and blood, and there produce a growth of bone." Robert Jones<sup>2</sup> believes that in the majority of cases the growth springs from the periosteum. He concludes this because of the frequency with which these growths are associated with dislocation; their frequent attachment to bone; their frequent growth between the bone and muscle and sometimes their attachment below the origin of the muscle which has been subjected to a violent strain; that in fractures shreds of periosteum may give rise to the development of bone apart from callus and reparative processes. It has been very much believed that the violent trauma in some way detaches portions of periosteum and osteoblasts, which are drawn into the muscle tissue by muscle fiber contraction. Binnie<sup>3</sup> questions this theory in reporting his case by stating that "if this is one of purely periosteal origin, then the scattering of the periosteal cells or grafts must have been through a territory extraordinary in length and in latitude wonderfully limited. Its origin from a separated periosteal flap is simply inconceivable in view of its relations to the innumerable discrete and degenerating muscular fibers.

\* From the Department of Surgery, University of Kansas.

\* Read at the Sixty-First Annual Meeting of the Missouri State Medical Association, Jefferson City, May 8, 1918.

1. Morley: Brit. Med. Jour., 1913, II, 1475.

2. Jones: Arch. Roentg. Ray, 1905-06, X, 10, 46, 72, 79.

3. Binnie: Ann. Surg., 1903, XXVIII, 423.



From careful examination of even this one case, one is forced to admit the possibility and probability of the bone tumor being the result of proliferation and metamorphosis of the intramuscular connective tissue." Fay<sup>4</sup> believes the condition to be a simple reparative process, because of its marked similarity to callus formation in fractures. Oliver<sup>5</sup> also concurs in this belief. Lapointe<sup>6</sup> is a supporter of the metaplasia theory, believing that the bone arises from the intramuscular connective tissue. It is quite evident that the new bone formation is not due to a true infection. There is, of course, some reaction to the injury on the part of the tissues, but no micro-organisms are present.

It is perfectly evident from this very brief summary of the various theories of the origin of traumatic intramuscular ossification that the causative factors are yet to be determined. If the ossification is due to detached or stripped up periosteum or dissemination of osteoblastic cells by direct injury to bone, why does it not more often follow the severe types of closed fractures? Certainly in such fractures there is very often a great tearing and stripping of the periosteum, often comminution of bone, with spicules pointing into the muscle in every direction and often severe laceration of muscle and connective tissue with resultant bleeding into these tissues. If dissemination of osteoblasts is a factor to be considered, could they have a better opportunity for such dissemination than in some of the most severe fractures? Ossification occurs in muscle remote from any other bony tissue. Several cases have been recorded in which bone has developed in abdominal wounds following laparotomy. Lewis<sup>7</sup> reports such a case. He explains the presence of bone in such a location by saying that "the incision passed through the lineae transversae, and this suggests that osteoblasts may have remained dormant in these lines which represent the extension forward of the ribs, and that these may have proliferated to form this new bone."

Animal experimentation with periosteal flaps and detached periosteum and bone with severe trauma to the muscle tissue has failed typically to reproduce this condition. Shere<sup>8</sup> says that the dominant cells in developing myositis ossificans are identical with those found in regenerating tissue following injury, and that these cells will, in time, become either true functioning connective tissue cells or they may undergo various metaplastic changes with the resulting formation of cartilage or bone. This is, of course, supported by finding the ossification

in muscle remote from bone. Binnie's suggestion that the scattering of the periosteal cells or grafts through a territory of such great length and through such limited latitude is quite pertinent. Cases are reported in which the bone formation extended almost the entire length of the quadriceps muscles. The deposit of bone in these cases takes place throughout the length of the mass at the same time, and is not a steady outgrowth from a limited area of bone.

Is there any foundation for the belief by some that there is an individual predisposition to ossification of muscle and tendon? Myositis ossificans progressiva is undoubtedly characteristic of certain individuals. It occurs in the young and in some cases is probably congenital. There is, at least in a vast majority, a congenital anomaly of the thumbs and great toes. Animal experiments have been unsatisfactory in the attempt to produce the lesions of traumatic ossification. The opportunity never has, of course, offered itself to experiment on the human tissues to determine whether or not any individual would develop bone in muscle tissue. One cannot say that the disease is an individual characteristic just because animals do not react the same as members of the human family. Family inheritance, as far as is known, has no bearing on the condition.

Myositis ossificans traumatica is almost always produced by a subcutaneous injury. A few cases have been reported following open wounds, including those described in laparotomy incisions. The growth of the bone perhaps more nearly resembles the callus formation and healing of fractures than any other process. Fay speaks of it as a simple reparative process. The tissue formed is undoubtedly true bone, as is shown both in the gross and by microscopic section.

The symptoms are those of a severe contusion and subcutaneous laceration of tissue. There is, of course, pain followed by swelling, tenderness and disability. These symptoms increase for a short time, but gradually subside, except, perhaps, the disability, which may extend over a period of several weeks or months. About three weeks after the injury a firm mass can be felt in the swollen area. A careful examination shows this to be, in places, of bony hardness. A roentgen ray taken at this time will show a shadow of developing bone. A few weeks later this mass will become better defined, more dense and more definitely of osseous consistency. The radiograph will show the bone more dense with a more distinct outline. The mass may be freely movable or definitely attached to the normal bone. In the roentgen-ray plate there may be a clear line between the normal bone and the ossified structure. At times the mass may be somewhat saddle shaped, and when viewed in the roentgen-

4. Fay: Surg., Gynec. and Obst., 1914, XIX, 174.

5. Oliver: Jour. Am. Med. Assn., 1914, LXIII, 145.

6. Lapointe: Rev. de chir., 1912, XLVIII, 657.

7. Lewis: Surgical Clinics of Chicago, Dec, 1917, I, 1119.

8. Shere: Jour. Am. Med. Assn., 1915, LXV, 1012.



ray plate appear attached to the bone when it is really free. An interesting characteristic of some of these bony formations is the resorption that takes place after several months. Cases have been recorded in which complete resorption has occurred.

The principal point to remember in diagnosis is the importance of distinguishing between intramuscular ossification and periosteal sarcoma. Many times the former has been diagnosed sarcoma and amputation advised or actually done. Bloodgood<sup>9</sup> believes that if the myositis is seen early, before bone forms, it cannot be positively differentiated from sarcoma, except at the exploratory incision; and in cases in which bone formation in muscle extends to the shaft of the neighboring bones, it may be difficult, even with the skiagram, to differentiate the lesion from periosteal osteosarcoma. Fay calls attention to the slower development of sarcoma, and, if it follow a trauma, a period of improvement which does not occur in the early development of myositis ossificans traumatica. In the former the mass has a tendency to increase in size and in the latter to reach a stationary stage, or, to some extent, undergo resorption. Oliver says that in myositis ossificans the sharp outline, corresponding to the junction of the growth with the bone, is always present, while in sarcoma it is less distinct except in very early stages of the disease. The consistence is much harder than in sarcoma and more uniform in character. Rarely is there pain in the early stages of sarcoma. In myositis ossificans the pain is apt to be an important feature in its early development. Coley<sup>10</sup> reports a case in which sarcoma developed in ossifying myositis after several years. It seems entirely possible, however, that this case may have been a sarcoma from the beginning. Coley advises exploration and examination of tissue when the diagnosis is in doubt. Bone lesions other than sarcoma may be considered in the diagnosis, but they all have characteristics that usually make them easily distinguishable.

The prognosis depends on the location of the mass and to what extent it may interfere with function. The bone formation is very apt to recur if removed early. If permitted to "mature" or "ripen," the likelihood of a cure is much greater. In a great many cases restoration of function is complete or nearly complete without operation. The mere presence of bone in muscle does not seem to cause any disturbance.

There is considerable difference of viewpoint as regards the most satisfactory treatment. The consensus of opinion is that the treatment should be conservative. There are cases in which operation is very definitely indi-

cated because of the functional disturbance caused by the presence of bone. Even in such cases it is wiser to wait until the development of the bone has reached a standstill, to avoid liability of recurrence. If operation is done the bony growth should be carefully removed down to the normal bone if it is attached to bone. Morley has made a new limiting membrane to cover the bone by transplanting the deep fascia. There is more radical in his views than the average, and urges that all early cases be treated by converting the closed into an open wound. He bases this treatment on the belief that traumatic ossification occurs only in closed wounds and on the further belief that in some cases the condition is a forerunner of sarcoma and should be looked on and treated as presarcomatous.

The following three cases are reported not because of their rarity, but as being typical examples of myositis ossificans traumatica in its broad sense:

CASE 1.—Myositis ossificans traumatica. The patient, a male medical student, aged 28, while in a football scrimmage eight years ago, was kicked on the outer side of the left thigh just above the knee. He was totally disabled at the time. There was marked pain and swelling at the site of the injury. He does not know whether or not a hematoma was formed. The swelling and tenderness lasted for about three and one-half months and the leg disturbed him during exercise for this length of time. A hard mass was discovered in the quadriceps muscle, but the patient does not remember just how long after the injury it was found. A roentgen ray was taken, showing the deposit of bone in the muscle. The swelling has never entirely disappeared, but has not increased in size during the last five or six years. After the injury he played two seasons of football without any difficulty. At present there is a palpable mass in the lower third of the left quadriceps muscle which never causes any subjective symptoms. There is slight limitation of flexion at the knee joint.

CASE 2.—Ossification in Achilles' tendon. L. H., a colored male, 54 years of age, was admitted to the Bell Hospital in 1917 with an ulcerating sarcoma of the foot. When about 10 years of age the patient's left tendo Achillis was severed with an ax about 6 cm. above its insertion into the os calcis. The tendon was not repaired. His father sutured the skin wound, which healed very promptly. He does not know of any injury to the bone at that time or at any subsequent time. The ossification in the tendon has never caused any symptoms, and the patient was not aware of its presence until he was told of its existence after he entered the hospital. Examination revealed a firm mass in the tendon about 5 cm. long by 2 cm. in thickness. There was a scar in the skin over the bone. The roentgen ray showed the mass to be dense bone. Examination after amputation of the leg showed the bony mass directly within the substance of the tendo Achillis.

CASE 3.—Rider's bone. G. H., aged 63, a colored male, was admitted to the Bell Hospital in 1915 with a urethral stricture, and while in the hospital developed a strangulated hernia, from which he died. This man had been a cook in the United States cavalry for thirty years, and during that time rode a horse almost daily. Fifteen years before admission to the hospital he injured the right thigh muscles of the adductor

9. Bloodgood: *Progr. Med.*, 1913, IV, 259.

10. Coley: *Ann. Surg.*, 1913, LVII, 305.

group, on the horn of his saddle when mounting. At the time he noticed a swelling about the size of a hen's egg high up on the inner surface of the thigh. This disappeared soon, and subsequently a hard mass appeared which has gradually increased in size. This increase was noticeable during the last six months. At no time has it ever caused him any pain or disturbance of any kind. The mass could be easily palpated in the upper adductor muscle tissue. It measured about 10 by 5 by 3 cm. The consistency was quite hard. It was movable to some extent, and apparently had no bony attachment to the femur. The radiograph showed an irregularly shaped piece of bone in the upper right adductor muscles, corresponding in size to the palpable mass. At necropsy the bone was everywhere covered with tightly adhering muscle tissue. At one small point, about 1 cm. in length, it had a fibrous attachment to a small bony prominence on the femur.

These three cases illustrate two types of myositis ossificans traumatica. The first is a typical example of intramuscular bone formation following a single, severe, subcutaneous trauma. The time of development of the bone in the tendon in the second case cannot be definitely determined. It may have developed immediately after the trauma or at some later time. This case is unusual in that the ossification followed an open wound. The third case is presumably one in which the bone was produced by frequently repeated traumas over a long period of time and may be considered a typical "rider's bone."

929 Rialto Building.

## ABLATIO PLACENTAE

WITH REPORT OF A CASE TREATED BY  
CAESAREAN SECTION \*

W. H. VOGT, M.D.

ST. LOUIS

The seriousness of this condition and the paucity of cases diagnosed has led me to the belief that premature separation of the normally inserted placenta is not generally well understood, or we are not sufficiently observing.

Its frequency has been greatly underestimated, for it has generally been assumed that it is of rare occurrence. I may be pardoned, therefore, if I give a short description of ablatio placentae, its etiology, pathology, etc., and lay particular stress on the symptomatology and diagnosis, and the necessary treatment. I am not presuming to bring forth anything new, but simply again call attention to this interesting and dangerous condition.

When the placenta becomes partly or wholly separated from its normal uterine attachment during the last three months of pregnancy or

before the termination of the second stage of labor, we speak of this condition as premature separation of the placenta. I shall not take a great deal of your time with a recitation of the history of this condition, but shall only mention that Rigley in 1776 was the first to clearly differentiate it from placenta praevia. To Goodell in 1870, however, belongs the credit of bringing the subject up for interesting study when he reported 106 cases of concealed accidental hemorrhage. Rigley designated the hemorrhage from premature separation of the placenta as accidental and that from placenta praevia as unavoidable. In 1901, Rudolph Holmes of Chicago again stimulated interest in this subject when he thoroughly reviewed the literature and suggested the name placenta ablato, or ablatio placentae, to displace the cumbersome name of premature detachment of the normally inserted placenta. Holmes has shown that this accident occurs much more frequently than was generally believed. It is hard to express its frequency in figures, for many large clinics have observed no cases at all while smaller clinics and obstetricians with only a limited practice have had occasion to observe a number of cases. From a general study, however, Holmes came to the conclusion that minor degrees of separation occurred about once in every 200 cases, and became of clinical importance about once in 500 cases. Other investigators seem to think that Holmes underestimated its frequency. No matter what the numbers are, these figures show clearly enough that it is not the rare condition described by previous writers. In my own limited experience I have seen the condition on eight occasions, always in consultation; never have I been so unfortunate as to have had them occur in cases for which I had been engaged.

*Etiology.*—A number of hypotheses have been advanced to explain premature separation of placenta—accidents, such as falls, violent exercise, blows on the abdomen, and sexual intercourse, and traction on a short umbilical cord has frequently been mentioned as a causative factor; but none of these seemed satisfactory, and for that reason other authors attributed the cause to lesions of the placental site or to a toxemia of pregnancy. In many articles nephritis is prominently mentioned as a possible etiologic factor. The true cause seems still to be doubtful.

*Pathology.*—In 1915, Williams reported two cases of ablatio placentae which he had treated by caesarean section, and since in both cases the uterus failed to contract properly after it was emptied, he decided to remove the organ supravaginally. The uterus presented a peculiar purplish, bluish appearance. A careful histologic study of these uteri was made and his

\* Read at the meeting of the St. Louis Medical Society, Oct. 19, 1918.



report shows mainly, hemorrhagic infarctions of the myometrium, extensive thrombosis and peculiar arterial changes, and from these examinations he concluded that arterial changes are probably very common and are of toxic origin and are due to the action of some substance circulating in the blood, possibly producing changes in the smallest arterioles that permit the blood to escape into the tissues. The hemorrhagic condition of the myometrium has, however, been observed before Williams again called attention to it, and I remember distinctly observing and calling attention to the peculiar dark blue discoloration in the case I shall later report. In 1911, Couvelaire reported to the Obstetrical Society of France a case which he had treated by caesarean section and noted this peculiar coloring; the histologic findings were practically the same as described by Williams. He designated this condition as utero placental apoplexy. Williams' findings are, therefore, not new, so far as the intramuscular hemorrhages are concerned, but his findings of arterial changes will bear further research and investigation.

In June, 1917, Arthur H. Morse read a paper before the Section on Obstetrics and Gynecology of the American Medical Association in which he described a series of experiments which had been carried on in the department of obstetrics in Yale University. At first he believed that the hemorrhagic condition in the myometrium might be caused by the extreme overdistension of the uterus from the profuse hemorrhage. He, therefore, injected the uterus of a pregnant dog with sterile salt solution so that the organ was so tensely filled that it was on the point of bursting. The opening of the uterus was then securely closed and the abdominal walls were approximated in the usual manner. After forty-eight hours the abdomen was again opened and an abortion was found to have taken place but no blood was found to have extravasated into the myometrium. He then concluded that even an extreme acute dilatation would not cause hemorrhage into the myometrium and dissociation of the muscle fibers. Later he decided to investigate what effect a blocking of the venous flow would have on a pregnant uterus. After tying off various groups of veins in the pregnant rabbit uterus he found no perceptible changes, for always was there a sufficient collateral circulation. Not until he tied off all three groups of veins, the ovarian, the mesometric and the uterovaginal was a result obtained. After two to four hours the uterus was opened and its cavity found filled with blood. The placenta was partially or completely separated and minute hemorrhages were visible in the myometrium. In other words, the experiment produced a premature detachment of the placenta, and on microscopic examination

the uterine wall showed extravasations of blood and dissociation of muscle fibers. Blood clots were found between the placenta and uterine wall, the same identical conditions that are found in ablatio placentae of the accidental type. Just what causes this blocking of the veins in human pregnancy is still a matter of study. Morse, however, quotes in his paper the findings of a case recorded by Glinski. This patient in her ninth month of gestation was suddenly seized with pain and died before surgical aid could be given. At the postmortem the uterus was found rotated out of its normal position 270 degrees to the right, the uterine cavity contained clotted and fluid blood and the placenta was partially detached. The myometrium was engorged and purple. In this instance it is believed that the disturbance of circulation was due to a mechanical factor and from this he draws conclusions which have a bearing on such conditions. He says that insufficient support as a result of weak abdominal muscles might readily permit a free mobility of the uterus and consequently unusual degree of torsion, thereby causing a stretching or kinking of the veins in the broad ligament and producing a condition in the human pregnant uterus as he was able to produce experimentally by tying the veins in the pregnant rabbit uterus. He, therefore, suggests that more attention be paid to the proper support of the pregnant uterus to avoid such accidents. This theory of blocking of the veins in the broad ligament seems very plausible and should be given special consideration in our future observation of these cases.

*Symptomatology.*—The most important symptom in these conditions is hemorrhage. There are two kinds of accidental hemorrhage, viz.: concealed and revealed. In the concealed type the blood is retained in the uterus. It is claimed that the true concealed type is very rare. In the eight cases that I have observed there was a complete absence of any external hemorrhage in six. In the early stages ablatio placentae consists in the development of a decidual hematoma, which causes compression and places a portion of the placenta out of function. These cases, as a rule, show no clinical symptoms and are recognized only after examining the freshly delivered placenta, when a smaller or larger blood clot will be found on the maternal surface. As a rule, however, the hemorrhage is more severe and extends to the margin of the placenta, and since the uterus still contains the fetus, it is unable to contract down properly and can, therefore, not compress the bleeding blood vessels, and the blood finally escapes between the membranes and the uterine wall and external bleeding appears. It is generally conceded that complete concealment of hemorrhage takes place, (1) when the placenta is centrally



detached and the blood accumulates back of it, but the margins of the placenta still remain adherent; (2) when the placenta is completely detached and the blood is restrained by adhesions of the membranes to the uterine wall; (3) when the membranes rupture near the placenta and the blood breaks through and mixes with the amniotic fluid; (4) when the presenting part so accurately plugs the lower uterine segment that the blood cannot escape externally.

The amount of blood lost can, therefore, never be gauged by the amount of external bleeding; one can only be guided by the constitutional effect. The patients usually complain of severe pain, not the pains of labor or contractions, but continuous pains, sometimes localized in one particular area of the uterus.

In the severe forms of concealed as well as revealed hemorrhage the uterus becomes extremely hard and has a very tense feeling, and the fetal parts can not, as a rule, be mapped out. The fetal heart tones are naturally absent early, for the fetus does not tolerate much separation of the placenta. Intense shock is always present.

*Diagnosis.*—Practically all antepartum hemorrhages are due to a separation of the placenta from the uterine wall and it behooves us to differentiate whether this separation has taken place in a placenta situated at the internal os (placenta praevia), or whether the detachment occurred in a placenta normally situated in the upper portion of the uterus, ablatio placentae.

When external hemorrhage takes place there is usually sufficient dilatation present to allow the tip of the index finger to pass through the os. If placental tissue can be felt either covering the internal os or lying to one side or the other, the diagnosis of placenta praevia becomes a simple matter. If, on the other hand, no placental tissue can be felt we are justified in making a diagnosis of ablatio placentae. Let me repeat—when there is no external bleeding, evidences of shock and anemia are present; when the uterus is firm and hard and there has been sudden increase in its size, and the fetal parts are not palpable, and the fetal heart tones are absent, one cannot fail to make a correct diagnosis; and the early correct diagnosis is the only thing that will lead to the proper treatment and perhaps save the patient's life.

There is usually no difficulty in differentiating between ablatio placentae and uterine rupture if we remember the following: in rupture of the uterus the accident occurs, as a rule, late in labor, unless the rupture is a result of external violence; while in ablatio placentae it usually occurs during pregnancy or early in labor and not as the result of long continued severe labor pains.

In ablatio placentae the uterus is enlarged and tense, but, as a rule, symmetric, while in ruptured uterus we find the organ small on one side, with a tumor (the fetus) on the other. In ruptured uterus there is a complete and, as a rule, sudden cessation of pains; in ablatio placentae, on the other hand, pain is constant, but not the pains of the contraction type.

*Treatment.*—When considering the mode of treatment the condition of the patient must always be kept foremost in mind. The amount of external bleeding is no guide to the amount of blood lost nor to the amount of separation which has taken place. Therefore, no definite rules can be laid down but each case must be treated as the indications demand. One must furthermore bear in mind that bleeding due to detachment of the placenta will continue until the uterus has been emptied of its contents, but it does not follow that every uterus should be emptied as soon as internal bleeding is diagnosed, for the milder types will bear careful watching and not infrequently labor will set in and terminate without any mishap. The severe types of bleeding, however, whether concealed or revealed, are the cases which demand prompt and rapid treatment.

The three most important conditions to be met are, (1) the uterus must be emptied; (2) the hemorrhage must be stopped; (3) the anemia and shock must be relieved.

The condition of the cervix will decide the method to be chosen for prompt and rapid delivery.

If the cervix is completely or almost completely dilated forceps may be applied to the presenting part or version done as seems best indicated; if the child is dead craniotomy will of course supersede the forceps unless the forceps delivery should be a very simple one. The further treatment would consist in removing the placenta and if the uterus failed to contract, then the use of the various methods which are in vogue for postpartum hemorrhage, on which I shall not now dwell. Various methods of delivery, however, have been suggested when the cervix is completely closed or only slightly dilated. The rupturing of the membranes, as is still recommended in many of our textbooks is, I believe, not advisable. In the milder cases this procedure is unnecessary, while in the severe types it causes delay and interferes with some of the more major procedures that may be necessary later on.

The use of the water filled rubber bag in the cervix to promote dilatation is, in the severe types, entirely too slow in its action; in the less severe types, however, it may be of some value.

Packing of the vagina with gauze or cotton as practiced by Tweedy and Wrench at the Rotunda Hospital does not seem to me a satis-

factory treatment. When a patient is bleeding profusely and is showing marked signs of anemia and shock we have no time to procrastinate and to experiment with methods that are neither rapid nor without danger. On several occasions in former years I have made use of the Bozzi dilator and I reported one such case a number of years ago. Since that time, however, I have come to consider other methods of delivery more satisfactory both from the standpoint of rapidity and safety.

Vaginal caesarean section may be done if one is skilled in vaginal operating but it cannot compete with the abdominal caesarean section. Abdominal caesarean section should, in my opinion, be the method of choice. It offers the best chance for the mother, it gives the fetus the only possible chance of living, and it gives the operator the opportunity of dealing with postpartum hemorrhage in the surest way, namely, by supravaginal amputation of the uterus. The shock is then handled as the case demands by any of the approved methods.

I should like to report a case of ablatio placenta recently seen and treated with Dr. R. Vitt.

Mrs. L., aged 34, had three living children; all previous labors normal. Her last menstrual period could not be definitely ascertained, but the patient estimated that she was about seven months pregnant. Patient began to have labor pains about midnight of May 31, 1918. The pains became steadily worse and about 4:30 a. m., June 1, 1918, Dr. Vitt was called. He reached her house at about 6 a. m. and found her suffering with severe pain and extreme anemia. Her uterus reached well up to the xiphoid process and was extremely tense, never seeming to relax. Dr. Vitt recognized that the patient was in a serious condition and transported her in his own automobile to St. Anthony's Hospital, where I saw her with him at about 9 a. m.

The patient was then in extreme collapse, almost pulseless and very pale. She was not now having pains, but the uterus was very hard and tense and extremely sensitive to touch; the fundus reached to the xiphoid process. Fetal parts could not be felt nor could the fetal heart tones be heard. Pelvis examination made per rectum elicited a soft cervix about one finger dilatation; a presenting part could not be felt. There was no vaginal bleeding and no history of the bag of waters having ruptured. The patient had a great deal of edema of the extremities and a specimen of urine taken per catheter before operation showed a large quantity of albumin and granular and hyaline casts. A diagnosis of internal hemorrhage due to premature separation of the placenta was made and owing to the seriousness of the case immediate delivery was decided on.

Since the patient's condition would not permit a general anesthetic novocain was used for local anesthesia. A caesarean section, using the high incision, was made without difficulty, the patient complaining of pain only when the abdominal walls were retracted. A seven months' dead fetus was promptly extracted and the placenta lay practically loose in the uterus, being attached to the uterus only by a narrow margin. The uterus was filled with the dark bloody amniotic fluid and blood clots. In this case the uterus contracted promptly, 1 c.c. of pituitrin having been given before the operation was begun. The uterus itself

showed the peculiar dark blue appearance mentioned before.

The uterus was sutured in the usual way and the abdomen closed with through and through silkworm-gut sutures in order to get the patient off the table as soon as possible. Before tying the abdominal sutures the abdominal cavity was filled with saline solution. Duration of operation was twenty-five minutes. Patient was put to bed and was in better condition than before the operation. She was stimulated in the usual manner and did very well until about noon when she had a convulsion which simulated in every way an eclamptic seizure, and she died about one-half hour later. No postmortem was obtained.

#### CONCLUSIONS

1. Ablatio placenta is not so rare as is generally believed.

2. With care and observation all cases of ablatio placenta, of the severe type particularly, should be recognized.

3. When concealed hemorrhage with shock and anemia are present, in the absence of cervical dilatation, the abdominal caesarean section should be the operation of choice, and in the event of no contraction of the uterus a supravaginal amputation should be performed.

4. The most important matter is the proper diagnosis and prompt and rapid interference by some method which causes the least injury to the mother.

Metropolitan Building.

#### EFFECTS OF THE USE OF PNEUMATIC TOOLS ON THE NERVOUS SYSTEM

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ST. LOUIS

The introduction of mechanical tools into the trades has been accompanied by numerous actual and claimed damages to human beings and been the more or less direct cause of the occurrence of new and particular diseases or the factor predisposing to the incitement of ordinary diseases in greater prevalence. Among such mechanical tools the pneumatic hammer in comparatively recent years has come to occupy a most important position in several lines, notably in ship building, the steel and stone industries.

It is particularly in reference to the stone industry that these remarks will apply, and more especially in so far as the pneumatic hammer is employed in the fabrication of limestone. Indiana limestone is at the present time one of the most important and largest used in building. It is not surprising, therefore, to find that the pneumatic hammer, although first introduced into the Bedford district some twenty years ago, has within the past several years become almost universally employed in the industry in this locality. And likewise, it was to be ex-



pected that this most general usage would emphasize any untoward effects on the worker which it might produce. Within the past two years complaints of ill effects from the use of the hammer have become prevalent in the Indiana belt, although these do not seem to have originated so much with the user of the hammer as with labor organizations of which he was a member. It has been claimed that the use of the hammer produced in the men a diseased condition affecting the nervous system and leading even to paralysis, insanity or other form of complete incapacitation.

In view of the fact that in current medical literature no mention of such diseased conditions from this causation could be found it became necessary to carry out an investigation to determine, if possible, whether such a disease actually did exist, its extent and seriousness, and if necessary, to study measures whereby its occurrence could be minimized or entirely done away with. Such a study is obviously of importance, not only to the workman alone, but as well to the operators whose interests are more broadly involved. The writer had an opportunity, in December, 1917, of studying this condition, which it was claimed affected workmen who used the pneumatic hammer. This investigation was directed primarily toward the study of the nervous system, although at the same time a complete general examination was made of a number of selected workmen. Recently investigations have been carried out in other parts of the country where the pneumatic hammer is used in ship building, the steel industry and granite cutting. From the reports of these investigations available it would seem that a somewhat similar condition was found to exist as that which was noted in limestone workers, although to a lesser degree. It was not found in any instance that the use of the pneumatic hammer produced any deleterious effect on the general health of the workers, excepting that in the hardstone workers possibly consumption was somewhat more prevalent. The mortality from consumption among limestone workers is no higher than the normal for other similar groups of people, and indeed there has been question raised if it is even as high. On the other hand, it has been the general finding that limestone cutters are as a class a robust, healthy group of men, somewhat above the usual average met with in other industries.

So far as this study was concerned the men using the pneumatic hammer in limestone were found to be in very good general health, none of the group examined showing any constitutional disease of any system, their troubles supposedly from the hammer being limited to a disturbance of the function of the left hand, which is commonly known as "white fingers" or "dead

fingers." As a general thing this condition occurs shortly after the men first go to work in the morning or until they have "warmed up." It occurs also during cold weather when the hands are exposed otherwise than in working. First the little finger and ulnar side of the left hand (in right handed men) become pale and blanched, this same area soon giving rise to tingling and numb sensations and even to slight pain at times. The ring finger and part of the middle finger may sometimes be involved in this process. By swinging the arms or rubbing the hands the condition may be made to disappear and when the hands are warmed the pallor rapidly gives place to diffuse flushing and reddening. The index finger or thumb of the right hand is occasionally affected, particularly in those workers who improperly control the exhaust by their finger or thumb. So far as could be determined this condition in the hands constitutes the sole trouble from which the stone workers complain in so far as the pneumatic hammer is concerned. In all of the stone workers examined the hands were somewhat reddened and flushed, but no more than reasonably might be expected to be found in hands of outdoor laborers. The hands were calloused to a varying degree in different subjects, but in all quite extensively. The palm and certain of the fingers of the left hand were more calloused than on the right. There was no actual cyanosis, excepting in one subject where this was slight. No swelling, no tenderness, no pain, no edema and no involvement of the muscles or joints. Paresthesia was absent, excepting in one subject who reported some numbness in his "white fingers." This was the only subject to show the condition well developed. Sensation for all tests was acute and practically normal. There was in most subjects a lowering of acuteness of feeling, some blunting or dulling, but this certainly was no greater than could be expected in hands where there was so much callus present. In all but one subject the callus was sufficient explanation for any variation from the normal which could be observed in sensation. In this one subject the sensory disorder passed off in a few minutes or as soon as the hands became warm. Mental disease was not present in any subject examined, nor was there any physical disease which could be in any way attributed to the occupation.

Such disorders of the extremities indicate very clearly that a disturbance of the peripheral circulation of the blood is responsible for their occurrence. The caliber of the peripheral blood vessels, and therefore the amount of blood supplied to the part, is dependent in large measure on the action of nerves which supply these blood vessels, and known as vasomotor nerves. The low temperature stimulates the sensory nerve



fibers in the skin and the nerve impulses thus aroused reflexly stimulate the vasoconstrictor center, or a part of it, and cause blanching of the skin. That cold may produce evident changes in the appearance of certain parts of the body, notably of the extremities, especially of the feet, hands, ears and nose, is a matter of common observation. It has been pointed out that exposure of the hands to cold usually produces at first a pallor of the skin which is evidently due to a constriction of the cutaneous arterioles. When the exposure is prolonged, however, the color is heightened and the skin usually becomes more or less cyanotic. Almost universally, therefore, cold produces a constriction of the cutaneous arterioles and a slow flow of blood through the skin. The variations in color are thus caused by the varying amounts of blood that collect in the skin capillaries. The flow of blood through the blood vessels is also in part influenced by the muscles which surround the vessels. Anything, therefore, which interferes with or impedes the normal action of the muscles will in turn have its effect on the circulation as it is the changing state of contraction and relaxation of the muscles which aids in the flow of blood under normal conditions. Where a group of muscles is held in a contracted state for a considerable length of time the circulation is thereby impeded.

With the stone cutter, whether using the chisel and mallet or the pneumatic hammer, the factors of cold, continued muscle contraction and cutaneous irritation are all present to a considerable degree and demand due evaluation in the consideration of such disorders in the hands as are sometimes observed. The fact, borne out with uniformity in this investigation, that the trouble occurs only in cold weather indicates most conclusively that the low temperature itself is one of the most important factors in the causation. The continued muscular contraction and the mechanical irritation (vibration) may play a rôle in its causation, but evidently these are of secondary importance. There are certain well recognized diseases which may bear a superficial resemblance to the disorders which sometimes occur in the hands of stone cutters. However, on close study, it is found that this resemblance is but superficial and that the condition observed in the hands of some stone cutters is not one corresponding to any disease known to medicine. The fact that such a condition as is here under reference has not been described in medical literature is, in itself, most highly significant. Whereas, the stone cutter has been working at his trade for centuries and the pneumatic hammer has been used in this trade for more than two decades, this condition of the stone cutters' hands has only been brought to attention within the past two

years. If a specific disease of the stone cutters' hands existed it is inconceivable that it should have so long escaped attention, not only of the medical profession, but of those interested in labor questions generally. That it is not due to the pneumatic hammer directly and primarily is proven by the fact that the condition was known to exist prior to the introduction of this tool. That the air hammer may have added somewhat to the frequency of its occurrence, as compared with the period when the chisel and mallet were used exclusively, is highly probable, but not proven. An extensive comparative study, which circumstances naturally make impossible, could alone settle this question. Again, the fact that the trouble when present, preeminently affects the left hand, which holds the chisel and not the hammer, indicates clearly that other factors than the hammer itself are of more signal importance in its causation. The cramped position of the chisel hand with the more or less continuously maintained contraction of the muscles is one of these important factors. However, the hammer or the grip on the chisel, either alone or combined, are not sufficient to produce the condition as is proven by the fact that it does not occur in the warmer seasons of the year when the stone cutting industry is at its height. The rôle of the vibration is uncertain, but as the trouble occurs in the hand not holding the hammer, it is doubtful if its importance is very great. Therefore, we have left the factor of low temperature which seems to be the final and most important element in the production of those vascular changes seen in the hands of some stone cutters, which although physiological in nature, form the pathological basis for the occurrence of stone cutters' "white fingers" and "dead fingers." So far as can be ascertained the condition leads to no permanent disability and results in no organic disease. Why it is that only a portion of stone cutters are affected cannot be answered. Whether certain undetermined conditions of poor general health or specific diseased condition existing, but not recognized, predisposes certain stone cutters to this disturbance is not evident from this investigation, although apparently such is not the case. With one or two exceptions they were all well developed, robust men, without demonstrable general physical or mental disease.

Conclusions drawn from a comparatively small series of observations must be subject to some limitations. However, the uniformity of the results of the examinations made in this investigation, taken together with the testimony of the workmen and of others, reasonably justifies the following deductions.

1. Stone cutters working in limestone, as a class, enjoy good general health and are not, because of their trade, especially susceptible to any particular disease.

2. Stone cutters are liable to a disorder affecting the hands, especially the left hand.

3. This disorder of the hands is of a vascular character, not due to organic changes in the circulatory system, but dependent upon vasomotor reactions.

4. These reactions are physiological in character and are occasioned by three factors incident to the work of stone cutting. These are: (a) mechanical irritation of the skin; (b) continued muscular contraction of a cramping nature; (c) low temperature, cold.

5. Of these three factors, cold is considered the most important because: (a) the condition only occurs during the very cold weather and never in the summer; (b) warmth and measures to restore the circulation (rubbing, swinging the arms and the like) cause its disappearance.

6. It cannot be caused by the effect of the air hammer alone because: (a) it occurs in those who have not used the air hammer; (b) it does not occur in warm weather when the stone cutting industry is at its height and, therefore, when the air hammer is most in use; (c) it occurs mostly in the left hand and not in the right hand in which the hammer is held.

7. This vasomotor disorder is of temporary duration and is not known to have resulted in permanent disability of the hand, nor itself to have been the cause of development of any other local or constitutional disease.

8. It is possible that once having occurred, the person is rendered more susceptible to its reappearance, just as is the one who has had his ears or fingers frost-bitten or "nipped" by the cold more susceptible in these parts to the subsequent exposure to cold. This explains the occurrence of "white fingers" in stone cutters when not actually engaged at cutting but otherwise exposed to low temperatures.

9. There is no sufficient reason in the signs and symptoms presented in this disorder to conclude that one has to do with Raynaud's disease, acroparesthesia, neuritis or an occupational neurosis.

10. The institution of measures to warm the chisel before and while using, enlarging the shank of the chisel and covering it to make it possible to hold without so cramping a grip, the wearing of gloves, and the discontinuance of the prevalent custom of blocking the exhaust outlet, and thus forcing a draft of chilled air out along the chisel and onto the fingers of the left hand, would do much toward the prevention of this trouble.

University Club Building.

# **LINITIS PLASTICA HYPERTROPHICA (GASTRIC CIRRHOSIS—LEATHER BOTTLE STOMACH)**

## REPORT OF A CASE

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This is one of our rare diseases of the stomach. It is characterized by an increase of connective tissue and involves chiefly the submucosa and other coats of the stomach, producing a noticeable thickening of its walls.

A number of terms for this condition are found in medical literature. Brinton, in his description of the disease, styled it *linitis plastica*; but cirrhosis of the stomach and hypertrophic stenosing gastritis are the terms most frequently employed.

This disease is one of adult life, and men are more frequently affected than women. As to its cause, there is a diversity of opinion among writers. Many believe that it is found most often in tuberculous patients; alcoholism as an etiologic factor has many advocates; and it is an established fact that lues produces a proliferation of connective tissue in the stomach wall. Some reported cases show that the fibrosis started from an ulcer.

The one hypothesis relative to linitis plastica worthy of discussion is, that it is an indefinite lesion and more than likely a variety of scirrhous cancer, as many cases would reveal epithelial nests, had a painstaking microscopic examination been made. This view is supported by analogous lesions in the ileum, colon, and other parts of the alimentary tract.

Anatomic alterations may be localized in the pylorus, or may affect the entire stomach. In the former instance the pylorus is encircled and made narrower by the infiltration of connective tissue. When the fibrosis is more diffuse, the stomach often becomes much contracted and similar in size to the normal colon. Cases have been noted in which the contraction was so marked that the lumen of the stomach was no larger than the small intestine. Usually the pyloric canal shows dense infiltration with stenosis and dilatation. In other instances the orifice is patent and thus, because of its stiffened walls, can neither contract nor dilate. In rare exceptions, the stomach is normal or increased in size, and the deposit of connective tissue in its walls is many times their normal thickness. The total thickness may be as much as 1 inch, and the layers of infiltration will be found quite distinct from each other and rarely uniform.

Physical examination in the early stages reveals nothing characteristic; usually a slight tenderness in the epigastrium, more noticeable after the patient has partaken of food. When thickening of the stomach wall occurs, the re-



sistance is apparent and a palpable tumor is revealed, which is firm, movable, and slightly tender. The characteristic symptoms of the localized fibrosis (when the lesion is situated in the pylorus) are those of stenosis and dilatation of the stomach, colicky pains in the epigastrium, tenderness to pressure, eructation of gas, and vomiting. The vomitus consists of accumulated food remnants. Hematemesis is usually present and suggests malignancy more often than an inflammatory fibrosis. In other forms of disease, the gastric symptoms usually appear early and terminate fatally unless relieved by surgical intervention. A roentgen-ray examination gives the most valuable aid in recognizing the lesion.

The following case, which has recently come under my observation, exemplifies the clinical features of this rare disease:

Male, D., aged 25, Nativity, Mo. Eight months ago began to have burning pains in the pit of the stomach. These were constant. Pressure and fullness were more or less present. Each morning before breakfast would vomit blood and mucus; sometimes the vomitus had a green cast with a fetid odor. Following this he began to vomit his meals and has done so at intervals up to this time. His eructations have the odor of spoiled eggs. Bowels were constipated, but since entering the hospital they have become more regular. He has lost considerable weight and gives a history of having drunk heavily for several years. Had a chancre eight years ago. Physi-

cal examination reveals habitus enteropticus (Lenhoff Index 81. This is determined as follows: the measurement from the suprasternal notch to the upper border of the symphysis pubis is divided by the circumference of the waist line at its point of greatest constriction, and the result multiplied by 100). General emaciation of body, lungs negative, heart and arch of aorta normal. Palpation of stomach elicits tenderness in the epigastric triangle at the epigastric pressure point revealing a mass, which is hard and smooth. The umbilical glands are not enlarged.

*Fasting stomach:* 30 c.c. siphoned after the twelve hour retention meal, T. A., 8; free acid, none.

*Microscopic examination:* Unchanged epithelia, none; infusoria, none; blood, positive; pus, positive; lactic acid, none; Boas-Oppler bacilli, none.

*Fractional test meal:* T. A., 10; free acid, none; many leukocytes enmeshed in the mucus.

*Blood:* Hemoglobin, 80 per cent.; white corpuscles, 6,300; polymorphonuclears, 58 per cent.

*Fecal examination:* Negative.

*Urine:* Amber color; specific gravity, 1.016; albumin and sugar, negative. No casts.

*Wassermann reaction:* Positive.

*Roentgen-ray findings:* Marked defect of the stomach, it being a narrow tube with a gaping pylorus. Peristalsis is apparently absent. The opaque meal is delayed a short time in the oesophagus until it can pass through the pylorus, which it does very rapidly. Suggests a gastric new growth with a leather bottle stomach. The duodenum is apparently normal.

Known presence of syphilitic infection in this case warrants antileuetic treatment which will be instituted. The diet is based on degree of insufficiency and character of secretion.

## ST. LOUIS SCHOOL FOR RECONSTRUCTION AIDES

Last month we published an editorial on the movement to establish a school of instruction at St. Louis for persons, especially women, desiring to assist in the reconstruction of wounded persons, particularly soldiers, and now present the plan of the school in more elaborate form than was available when the January number was issued. The announcement, made by Mrs. Elias Michael, State Chairman, St. Louis Women's Committee, Council of National Defense, follows:

The organization of the St. Louis Training School for Reconstruction Aides, under the auspices of the St. Louis Woman's Committee, Council of National Defense, and the St. Louis Junior League, is the direct result of the call from the Surgeon-General's Office for trained women to furnish forms of occupation to convalescent soldiers.

These forms of occupation are not primarily vocational, but rather curative or therapeutic. Their purpose is to restore activity to stiffened joints or injured limbs, and perhaps even more important to arouse the interest and direct the confused mind of the invalid into an attitude of hope and determination. "For it is during the period of convalescence that the battle of the spirit and of the will is fought, and it is during this time that the disabled soldier decides what he will endeavor to make of his future."

Many communities throughout the country have organized their resources for this training. Courses are now being given in New York, Boston, Philadelphia, Buffalo, Chicago, Portland and Berkeley, Calif. The recent decision of the War Department to establish a military hospital in St. Louis hastened the organization of the St. Louis resources with the result that the school opens December 2, at the St. Louis School of Fine Arts.

The course is divided into three departments. The

teaching of handicrafts approved by the Surgeon-General's Office will consist of basketry, weaving, to include hand loom and simple rug and mat making, metal work, bookbinding and leather work, stenciling and design, book block printing and design, woodwork and toy making, pottery, beadwork, sketching and etching, modeling and concrete. At the same time there will be conducted a series of lectures by medical experts on such subjects as the history and purpose of occupational therapy, applied psychology, the approach and handling of patients, general medical problems, mental and nervous diseases, military procedure and hospital routine. The final department of training will be a period of hospital practice. This is an essential part of the course, designed to give students the necessary experience and self-confidence.

Appointments as reconstruction aides cannot, of course, be guaranteed by the school. It is difficult at this time to obtain authoritative information as to just how many reconstruction aides will be needed for our disabled soldiers. The earlier estimates, based on the continuation of the war, must happily now be revised on a declining scale. But of the fact that the needs have not yet been met there is no doubt. The immediate inspiration for the training is, indeed, the military need, but when that need is met, it is the belief that this training will qualify women for a broad field of service in civil institutions and among industrial cripples.

Students of arts and crafts, teachers, nurses and social workers are likely to have the necessary background for successful work in occupational therapy. In general, however, applicants should have an attractive and forceful personality, good sense, tact, cheerfulness, real sympathy, and a fairly high degree of physical fitness. High school education or its equivalent furnishes the required educational background. The age limits are 23 and 45, though exceptions may be made.



**THE JOURNAL**

OF THE

**Missouri State Medical Association**

FEBRUARY, 1919

**EDITORIALS****MEDICAL SNIPERS**

The season has arrived when the medical snipers arm themselves for the pleasant pastime of trying to shoot our medical law full of holes. The hunting ground is the legislative halls at Jefferson City, the ammunition fat bank rolls and well oiled tongues crying anathema upon the "medical trust." The disgraceful behavior of some lobbyists for the chiropractors, optometrists, and others in the last general assembly, still fresh in the minds of the hold-over members of the legislature, ought to debar such persons from the legislative halls forever; but they are back at the old stand trying to persuade enlightened representatives of the people to metamorphose ignoramuses to men of letters.

Measured by their own yardstick the chiropractors are self-condemned because their principal argument to students is that no education is necessary, the short correspondence course is easily acquired, and (in big type) they can earn from \$1,500 to \$5,000 a year! No preliminary education, no study of the human body. No, indeed. The talk about germs, microscopes, therapeutics, is tommyrot. All you need is a papier mache imitation of the spine and \$68.75 for the complete course.

The optometrists are not so boastful of their lack of an education, paying some attention to school courses, at least on paper, but they are seriously deficient in discerning the limitations of fitting glasses for defective vision. As soon as their ambition for legal recognition is realized they at once become "doctors" and "specialists" on "eyesight" without knowledge that would enable them to distinguish a defect in the visual apparatus from diseases of the body that manifest their presence through lowered vision. It is a common practice for optometrists to fit glasses for headaches and eyestrain and lowered vision from constitutional causes, thus often permitting serious and fatal diseases to pass beyond control by the most competent physician. In short, they practice medicine and fit glasses as a remedy for disease.

The chiropodists will also be in Jefferson City with their bill to license them to do various surgical stunts on the feet under the guise of

trimming corns. They, too, will want to climb and ere long their chiropodical excursions may extend to the neck. If the brain were encased in muscular tissue instead of a bony structure doubtless these Knights of the Corn might even invade the seat of reason on the theory that the brain controls the foot.

The Christian Scientists, the mental therapists, the antivivisectionist and other Bolshevik rabble will be on hand to obstruct progressive legislation for the conservation of the health of the people if not to obtain special privileges for their own creeds.

The majority of the members of the Fiftieth General Assembly are well intentioned and favorable to laws that will make for the uplift of the people. We must inform them of our opinion on all medical bills and questions affecting the health of the people and stand firmly against destructive and obstructive measures while vigorously pushing those that promise to conserve health. Therefore we urge all members to correspond with their representatives and senators and strongly advise against the passage of the following measures:

1. The Chiropractic Bill.
2. The Optometry Bill.
3. The Chiropody Bill.

At this writing no bills have been introduced in either house of the legislature so we cannot give their numbers; but the important point is to let your representatives know that you oppose these measures so that he will take time to study them and give us an opportunity to protest against their passage when they come up for hearing.

There are several bills that must be supported by the medical profession, the one of greatest importance being the state board of health bill. Every physician knows that the state board is powerless to enforce any measure for the control of communicable diseases. Some of the incorporated cities have modern laws on this subject, but outside of their boundaries the people are unprotected. The passage of the bill for the board is most urgent and our members should bend every effort to secure its adoption. In his message to the legislature Governor Gardner made a strong plea for the passage of the bill for the state board in which he said:

"In view of the fact that the public health of the nation is its greatest asset and realizing our present statutory deficiencies for protecting the health of the people, as indicated by recent emergencies and statistics available since the outbreak of the war, and in view of the fact that the military efficiency of the United States has been seriously impaired by reason of the

presence of communicable diseases, particularly venereal diseases, from which 11 per cent. of the men in the first draft inducted into service were infected, it is apparent that we are in need of laws empowering the state board of health to better protect the public health, to determine the reportable communicable diseases, and to require that such be reported under penalty for noncompliance. It is also necessary to delegate to that body adequate and full supervision of all public health work throughout the state whereby the present emergency and future emergencies of similar nature can be met.

"It is also necessary that a special fund be appropriated and placed at the disposal of the state board of health for cooperation with such allotments from the federal appropriation as are made available by the passage of the Kahn-Chamberlain Act, which cannot now be placed at the disposal of the Missouri State Board of Health because of the failure to provide statutory power by which the board can comply with the conditions imposed.

"A bill for your consideration will be presented by the department. The purpose of the bill will be to completely reorganize and modernize this branch of state work. The extension of the work will require a considerable amount of money which we are unable to supply from the ordinary receipts of revenue. Therefore, as the control of communicable diseases and the bearing on marriage are of such tremendous importance, it seems to me very fitting that a state marriage license of \$2 should be imposed to meet the expense of the work contemplated by the department. Other important reasons might be assigned for keeping an accurate record of marriages. Matters of litigation, wills, inheritances, etc., would be greatly aided by such records."

In addition to the bill for the state board of health we should give our full support to the passage of the Workmen's Compensation Bill and the bills introduced by the Children's Code Commission. Let your representatives know that you favor these measures.

The amazing triumphs of the medical department of our army in the war with Germany in keeping down the death rate from disease and injuries surpass anything of a similar nature in the history of the world. Every member of the legislature is well informed of these achievements and knows that it was the educated, skilled, licensed, graduate of medicine that performed these astounding deeds—not the medical snipers, the osteopath, the chiropractor, the Christian Scientist, nor any other so-called healer fatuously muttering meaningless jargon or mercilessly mauling the spinal column.

## OUR RETURNING MEMBERS

Dropping into their home towns, quietly and unheralded, our members are returning to their homes and practices after serving their country on the battlefields, in the war hospitals at the front, in camps, hospitals and pestilences in this country, as well as in numerous departments of the government where their counsel was essential in maintaining the health of the fighting forces of the nation and safeguarding civilians.

The medical profession of Missouri, and especially the organized medical profession as represented by our organization, has every reason to be proud of its members, for they have shown brilliantly in the all-star team of physicians in the Army and Navy.

In all previous wars disease not bullets have killed the majority of those whose lives were sacrificed; but in this great conflict the science of medicine was applied to the preservation of the health and lives of soldiers and civilians with such remarkable ingenuity that the triumphs of our army surgeons at home and abroad, and of the medical corps of the allied forces, mark an era of development in the healing art that will forever stand as a marvelous demonstration of human resourcefulness in meeting an emergency.

To this great work Missouri contributed 1,499 of her best physicians, being 24.7 per cent. of the total number of physicians in the state. Out of this number 1,022 are members of our association, or 68 per cent. of the number under commission. Our members have distinguished themselves in surgery, internal medicine, neurology and psychiatry, pathology, sanitation and preventive medicine, and other branches of the science, in such manner that they have gained distinction for themselves and reflected honor on the medical profession of the state. When the history of the medical service in the war is written, Missouri physicians will have an honorable place among those who have shed luster on the medical profession of this country and demonstrated the latent power and resourcefulness characteristic of the American physician.

That the army surgeons at the front have gloriously upheld the traditions of the profession by freely exposing themselves not only to pestilence and disease and the relief of the wounded, but also to the fire of the enemy in their effort to succor, is attested by the large number of surgeons who have been killed in action and died from wounds, disease, and accidents. In Missouri we have lost ten physicians, five of them killed in action or succumbing to wounds, two from accident, and three from disease. Eight of the ten were members of our association. Besides these casualties,



five were captured by the enemy; their lot while held prisoners every one will realize was not an enviable one.

As our members return to their homes they will find their fellow-members ready to welcome them and restore the patients and families that have found it necessary to call a physician during the absence of the physician-soldier. Some of the county societies are preparing to give formal expression of their welcome to the returned members and the program committee of the state association will undoubtedly arrange a session at the Excelsior Springs meeting to hear the war experiences of our members safely returned home.

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### MEDICAL INDEPENDENCE FOR AMERICA

The war has brought to the medical profession of America a fuller realization of the resourcefulness of the American physician than perhaps would have come to us in many years without such an upheaval.

We have boasted that we were supreme in some respects, particularly in general surgery and specialization in that art; but physicians and scientists in America did not, as a rule, place a high degree of confidence in developments in bacteriology, therapeutics, and chemistry, unless they bore the German stamp. In medical literature there was a fixed idea that no important contribution was complete unless German periodicals were quoted. A chemist remarked recently that when German periodicals on chemistry became unattainable during the war he thought his progress in the science would almost cease but that he soon discovered he could get along very well without such literature. The New York branch of the American Chemical Society has recently proposed the organization of an American Chemical Institute, to be conducted under the auspices of the American Chemical Society, for the purpose of introducing and cultivating new and important medicinal products in this country and make the United States forever free and independent of German manufacturers. In fact, steps in this direction have already been taken by certain native pharmaceutical manufacturers.

No good reason exists for American medicine to be dependent on any country for any article needed in the development of the science. We should encourage the cultivation of a closer relationship with those nations that have found American physicians ready to serve and aid in the great conflict for liberty and independence, and never should we again allow the development of any branch of the science to go beyond our boundaries with such completeness that a

disturbance of friendly relations, national or individual, would deprive the medical profession of this country of any necessary adjunct in the practice of medicine or the investigation of scientific problems.

This theme will have attention at the Atlantic City session of the American Medical Association in June, which is to be a victory meeting, according to an announcement in *The Journal of the American Medical Association*. The meeting will be semigovernmental in its character and is approved by the Secretary of War. Invitations are being sent to the embassies and legations at Washington representing the allied governments and plans are being completed to make this session of such scope that the medical profession of the United States will be more prominently identified with the progress of science throughout the world than it ever has been in the past. In the plans for the Atlantic City session of the national organization the constituent associations will have their share and therefore some provision should be made at our annual meeting for cooperating in this movement to the fullest extent.

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### WESTERN SURGICAL ASSOCIATION

The twenty-eighth annual meeting of the Western Surgical Association was held in the Hotel Sherman, Chicago, Dec. 20 and 21, 1918, the president, Major James F. Percy of Galesburg, Ill., presiding. It was noted that the Western Surgical Association, out of a membership of 150, had contributed between 50 and 60 members to military service. Owing to this fact, the attendance was slightly smaller than usual, but the meeting was a most excellent one in every particular.

Notable features of the scientific program were a lantern slide demonstration on the prostate gland by Dr. Ousley of New York. Dr. McGee of Duluth and Dr. B. B. Davis of Omaha dealt with diseases of the gallbladder, which led to a most interesting discussion as to whether or not the gallbladder should be removed when diseased. The consensus of opinion of those present was that the diseased gallbladder sooner or later should be extirpated. Dr. H. M. Richter of Chicago read a most interesting paper on perforating ulcers of the stomach and duodenum, reporting sixteen cases with but one death. Dr. Horsha of Chicago gave some very interesting points regarding the treatment of fractures by the early use of plaster of Paris with extension.

The annual banquet was held on the evening of the 20th. Addresses were given by Dr. George H. Simmons, editor of the *Journal of the American Medical Association*, Dr. Jabez N. Jackson of Kansas City, Mr. Mangasarin,



and the annual address of the president, Dr. Percy.

It was decided to hold the next meeting at Kansas City, and Dr. Howard Hill was appointed chairman of the committee of arrangements. Officers elected for 1919 were: President, Dr. Roland Hill, St. Louis; first vice president, Dr. Emil Beck, Chicago; second vice president, Dr. George M. Kreider of Springfield, Ill.; secretary-treasurer, Major Arthur T. Mann of Minneapolis; Dr. Jabez N. Jackson of Kansas City and Dr. Edward S. Judd of Rochester, Minn., members of the executive committee for the year.

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## OBITUARY

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### JOSEPH LOUIS SWARTS, M.D.

On Dec. 24, 1918, Lieut. J. Louis Swarts of St. Louis, M. C., U. S. Army, on duty at Fort Oglethorpe, died of pneumonia and empyema. His death is a deplorable loss to the medical profession of St. Louis and of the state for he possessed a brilliant mind, a lovable disposition and perseverance in the development of the science of medicine. In the service flag of the St. Louis Medical Society, which contains 317 stars, a single gold star has been added to represent the loss of Dr. Swarts, the only member from St. Louis who has died in the service.

Dr. Swarts was born in St. Louis thirty-three years ago. He graduated from Smith Academy at St. Louis and from Harvard, and in 1911 from the medical department of the St. Louis University. After two years' internship in the St. Louis City Hospital he went abroad, visiting the clinics of Berlin, Vienna and London, devoting most of his time to the study of pediatrics in the Vienna clinics. He was a member of the visiting staff of the Isolation Hospital and lecturer on pediatrics at the St. Louis University. During the summer of 1918 he entered the army. After a short period of training at Fort Riley he was sent to Base Hospital 14, Fort Oglethorpe, Ga. He was exceptionally well qualified to practice medicine and was an ornament to the St. Louis profession. He was a member of the St. Louis Medical Society, the Missouri State Medical Association, the St. Louis Pediatric Society, and a Fellow of the American Medical Association.

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### WILFORD A. FAIR, M.D.

In the death of Dr. Wilford A. Fair of Pleasant Hill, Captain, M. C., U. S. Army, the association has lost a faithful member and the community in which he lived a skilled physician

whose genial disposition and upright life endeared him to a wide circle of friends and patients. He was killed by snipers in the Argonne Forest, Oct. 6, 1918, when he ran to the aid of Capt. H. B. McPherson, who was mortally wounded and lying in an exposed position under machine gun fire. He reached the wounded officer but fell a victim to the enemy's fire before he could aid his friend. Among his effects the Croix de Guerre was found in a wallet. He was serving as a lieutenant at this time but he had been recommended for promotion to a captaincy and the



WILFORD A. FAIR, M.D.

commission was forwarded to Mrs. Fair by the War Department after his death. He was attached to the Twentieth Engineers, Forestry Division, and had endeared himself to officers and men by his faithful devotion to duty and his unfailing cheerfulness under all conditions. He was among the first Missouri physicians to volunteer their services soon after war was declared and was sent across in November, 1917.

Dr. Fair was thirty-four years of age and graduated from the University Medical College of Kansas City in 1909. For six months he served as assistant physician in the State Hospital at Nevada and then practiced in Belton with his brother, Dr. S. W. Fair, for several months. He then moved to Pleasant Hill. He was the sixth physician from Missouri to give his life to his country, there being ten medical officers from this state who have paid the supreme sacrifice.

## NEWS NOTES

THE next meeting of the Gasconade-Maries-Osage Medical Society will be held at Meta, April 24.

DR. F. A. MAYES of Hayti has been ill for the past three or four months, but is now improving.

THROUGH the death of Dr. J. C. Matthews of Springfield the office of second vice president became vacant and President Overholser has appointed Dr. F. B. Fuson of Springfield to fill the unexpired term.

DR. ROLAND HILL of St. Louis was elected president of the Western Surgical Association at its last annual meeting. The 1919 session of the association will be held at Kansas City and Dr. Howard Hill of Kansas City has been appointed chairman of the committee on arrangements.

A PHYSICIAN is needed at Hobson, Dent County, according to a letter from the postmaster at that place. Dr. William Lenox has been there for many years but is now too old and feeble to continue in active work. Further information will be supplied to any inquirer by A. E. Sellers, postmaster, Hobson, Mo.

DR. T. T. O'DELL of Marionville has been discharged from the Army and spent several weeks in St. Louis studying in the eye, ear, nose and throat clinics. Dr. O'Dell will specialize in these diseases and expects to open an office in Springfield but will continue to reside in Marionville.

DR. H. M. DELAMETER, health officer of St. Joseph, makes the following recommendations in his annual report to the health department of that city: The passage of a food ordinance, establish a memorial hospital for soldiers and sailors, measures to control venereal diseases, pasteurization of milk sold in the city, teaching hygiene in the senior grade of high school, increase of funds for the maintenance of a hospital for tuberculosis and for the removal of garbage.

AT the request of the Bureau of Standards at Washington, government testing of rubber tires will henceforth be carried on at the laboratories of the University of Akron for the Akron district and all factories west of Akron. Tires purchased on specification by the government from various rubber companies will be chemically tested by a staff of men assigned to the laboratories under direction of the Bureau of Standards. The work will be installed and

supervised under the direction of Mr. Arnold Smith, an Akron man and formerly a student at the municipal university, now employed at the Bureau of Standards. In all probability a force of at least a dozen chemists will be employed in this work. Entire direction of the work will be assumed by the Bureau of Standards and the University of Akron will furnish space and to a certain extent equipment.—*Science*.

DURING December the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Non-proprietary articles: Benzyl Benzoate; Emetine Bismuth Iodide.

Abbott Laboratories: Emetine Bismuth Iodide-Abbott.

Hynson, Westcott and Dunning: Benzyl Benzoate-H. W. and D.; Solution of Benzyl Benzoate, Miscible-H. W. and D.

Merck and Company: Diethylbarbituric Acid-Merck; Diethylbarbituric Acid-Merck Tablets, 5 grains; Sodium Diethylbarbituric Acid-Merck; Sodium Diethylbarbituric Acid-Merck Tablets, 5 grains.

H. K. Mulford Company: Bismuth Emetine Iodide-Mulford; Cachets Bismuth Emetine Iodide-Mulford, 8 grains.

E. R. Squibb and Sons: Chlorinated Eucalyptol-Squibb.

Takamine Laboratory: Arsaminol: Arsaminol, 0.1 Gm. Tubes; Arsaminol, 0.2 Gm. Tubes; Arsaminol, 0.3 Gm. Tubes; Arsaminol, 0.4 Gm. Tubes; Arsaminol, 0.5 Gm. Tubes; Arsaminol, 0.6 Gm. Tubes.

THE will of Capt. Joseph Raphael De Lamar, mine owner and director in many large enterprises, leaves nearly half of his estate, estimated at \$20,000,000, to Harvard University Medical School, Johns Hopkins University and the College of Physicians and Surgeons of Columbia University for medical research into the cause of disease and into the principles of correct living. The bequests to these institutions in equal shares consists of his residuary estate, estimated at about \$10,000,000. He gave a trust fund of \$10,000,000 to his only child, Alice Antoinette De Lamar, with the provision that if she dies without issue the principal of this fund also goes to the institutions named. The clause setting aside the residuary estate requests that the fund be used as follows:

For the study and teaching of the origin of human disease and the prevention thereof; for the study and teaching of dietetics and of the effect of different food and diets on the human system, and how to conserve health by proper food and diet and in connection with the foregoing purposes to establish and maintain fellowships, instructorships, scholarships and

professorships; to construct, maintain and equip laboratories, clinics, dispensaries and other places for such study and reasearch and to provide proper housing of same; to publish and disseminate the results of such study and reasearch, not only in scientific journals and for physicians and scientists, but also, and this I especially enjoin on the legates, by popular publications, public lectures and other appropriate methods to give to the people of the United States generally the knowledge concerning the prevention of sickness and disease, and also concerning the conservation of health by proper food and diet.

The will suggests that the legates use any means they deem expedient for the purposes named, and requests that the fund be kept intact.—*Science*.

## MEMBERSHIP CHANGES, JANUARY

### NEW MEMBERS

Backhusen, Henry Rich, St. Louis.  
 Baker, Clark E., St. Louis.  
 Boehm, Emil, St. Louis.  
 Cope, Paul Francis, Kansas City.  
 Davidson, James H., Gilliam.  
 DePew, Heber B., St. Louis.  
 Edmundson, J. Phil, Kansas City.  
 Glosemeyer, Louis H., O'Fallon.  
 Howe, Elmer D., St. Louis.  
 Hunt, Claude J., Kansas City.  
 James, Hiram G., Ava.  
 Kyner, Charles, Kansas City.  
 Mellies, George A., St. Louis.  
 Meluney, Solomon E., Agency.  
 Schmidt, William C., Augusta.  
 Sewell, Minor F., Malta Bend.  
 Shepler, Ross H., Mystic, R. D. Green City.  
 Stanze, Frank J., St. Louis.  
 Stouffer, Robert W., Napton.  
 Yaley, Charles M., St. Louis.

### CHANGES OF ADDRESS

Babcock, Bert W., Forest City, Mo., to Lamont, Mich.  
 Clemens, James R., Creighton University, Omaha, Neb., to 4915 Argyle Bldg., St. Louis.  
 Dalton, Alexander E., Friedheim to Cape Girardeau.  
 Higdon, E. E., Olney Springs, Colo., to Allenville, Mo.  
 Inman, Samuel L., Kempton, W. Va., to El Paso, Texas.  
 Jones, B. F., Rives to Holland.  
 Lamb, Jay Hugh, Centerville, Mo., to Buffalo, Ala.  
 Morris, Robert H., Linneus to 207 W. Armour Blvd., Kansas City.  
 Pettijohn, Abra C., Vinita, Okla., to St. Joseph, Mo.  
 Frame, H. G., Republic to Mountain Grove, Mo.

### TRANSFERRED

Cockrell, Eugene P., Somers, Mont., from St. Louis County Medical Society to Montana Medical Society.

Shattinger, Charles, St. Louis, from St. Louis Medical Society to Santa Clara County (Calif.) Medical Society.

### DROPPED

Bitter, Carl H., St. Charles.  
 Gilkeson, Hugh P., Warrensburg.  
 Steele, Wallace E., Kansas City.

### RESIGNED

McConkey, Clarence M., Weskan, Wallace County, Kan.  
 Mott, James R., Grovespring.

### DECEASED

Alder, John E., Cane Hill.  
 Atkins, Henry S., Kirkwood.  
 Jarvis, William M., Slater.  
 Scott, James M., St. Louis.

## CORRESPONDENCE

### INDUSTRIAL PHYSICIANS

WASHINGTON, D. C., Jan. 11, 1919.

*To the Editor:*—We are enclosing Circular No. 1 of this section and we earnestly solicit your cooperation in giving space to this very vital government service.

We are particularly anxious to reach the class your publication represents and would appreciate it if you would forward us a copy of your edition containing this story, should you see fit to use it.

By direction of Passed Assistant Surgeon A. J. Lanza, medical officer in charge.

BEN B. HOOVER,

Chief, Section of Edits and Reviews, Division of Industrial Hygiene and Medicine; Working Conditions Service, U. S. Department of Labor.

The circular follows:

The demand on the newly established Working Conditions Service of the United States Department of Labor, for industrial physicians and surgeons, has grown so rapidly that the service has been compelled to establish a bureau of registry of physicians specially skilled in this growing phase of medical and surgical specialization.

Manufacturing interests throughout the country are becoming impressed with the vital necessity of properly safeguarding the lives and health of employees, not only from the viewpoint of the new humanitarianism but from a sense of business foresight.

The new registry bureau is prepared to furnish industries with the names of skilled industrial medi-



cal advisers on request. The demands for competent medical directors for the factory departments of hygiene are being met by the service with an adequate list of physicians, all of whom have had experience and training in this particular function. Hundreds of such physicians are listed in the government's registry bureau in Washington and hundreds are being added to the registration files.

In each instance the service satisfies itself of the training of the physicians before their names are allowed on the list. Thus, only those best qualified are listed and manufacturers have the advantage of knowing that by availing themselves of this service their dispensary section will be in competent hands.

In addition to submitting names from the physician's registry bureau, the service is making investigations—only on request, however—of the general facilities for protecting the lives and health of employees. This work is carried on from branches of the service now being established within easy reach of the nation's industrial centers. When such surveys are concluded a report of the findings, with recommendations, is delivered to the responsible head of the particular industry. In this manner industries are assured reliable and unbiased information from authorities who have studied industrial problems exhaustively, with expert training in hygiene, sanitation and related subjects.

Employers and employees have expressed approval of the plans inaugurated by the Working Conditions Service, and have shown a desire to cooperate in the establishment of factory hygiene departments. From the viewpoint of national welfare it is a mighty stride toward bringing employees and employers to a recognition of common purpose and mutual benefit, and the demands on this newly established service can only be interpreted as indicative of the value of the medium that has arisen most opportunely.

## MISCELLANY

### LEGISLATIVE OUTLOOK

(By our special correspondent)

JEFFERSON CITY, Jan. 24, 1919.

All physicians in Missouri will have to report communicable diseases if the General Assembly approves a bill introduced by the state board of health. The bill is a composite of the best state health laws adopted in other progressive commonwealths and if passed would give Missouri an effective measure to control communicable diseases throughout the state. While St. Louis, Kansas City, St. Joseph and Springfield have ordinances requiring some communicable diseases to be reported to the local boards of health the people in the rural districts have no such protection.

Governor Gardner indorsed the measure in his message to the legislature and the Missouri State Medical Association is cooperating with the board to try and have a complete statistical report of all contagious diseases with the view of helping to minimize the spread of communicable diseases. Members of the state board of health feel confident that the legislature will pass the necessary legislation to help in this work.

The lawmakers of Missouri are discussing laws for health.

The influenza epidemic furnished material for the legislators to realize that the statutes of this state are inadequate as far as precautionary regulations are concerned relative to communicable diseases.

The state board of health has been unable to obtain the necessary statistics in the rural districts as to

the progress of germ diseases. If the board could be kept posted as to the progress of communicable diseases, the spread of many communicable ailments could be greatly minimized.

Isom P. Langley of Lebanon is chairman of the committee on public health in the House of Representatives. His associates are Representatives Speer, Porter, Babcock, Harwood, McMillan, Davidson, Jones of Wayne county, Watts, Taylor and Stephens. In the Senate bills pertaining to health probably will be referred to the eleemosynary committee composed of Senators Livesay, chairman; Harris, Buford, McKnight, Mayes, Belken and Pickett.

In former years there was considerable agitation among the representatives and senators as to the advisability of including tuberculosis as a communicable disease and require all cases of consumption be reported by the attending physician. Several years ago the board of health in St. Louis made a vigorous fight to have all cases of tuberculosis reported to the sanitary division of the health department. A special book was kept for these reports, and the names of the patients so recorded were not divulged to the general public, only in case of death. The system was not a success as many physicians did not report the cases until the patient was in the last stages and had no chance to recover. In view of the splendid results at the state sanatorium for tuberculosis and the wide-spread knowledge among the people that consumption can be arrested and cured it is likely that the attitude of the present legislature will be favorable toward the reporting of this dreaded disease.

Concerted action, however, will be taken to force physicians to report venereal diseases. The doctor will not have to disclose the names of his patients, but he will have to report the number of cases he is treating. The United States government has made an appropriation of \$1,000,000 to assist in the control of venereal diseases. Missouri will participate in this appropriation if the legislature will draft a virile statute relative to such diseases.

The physicians of this state are hoping the law will be so drafted as to permit vigorous inspection when the cases so demand. During the war period women of the underworld were arrested by the local authorities in the larger cities in Missouri and given a rigid investigation. Where they suffered from venereal diseases they were placed under medical care and prevented from spreading the infectious germs.

The health authorities had no laws under which to take this action but no legal complications arose as it was a war measure and was enforced to protect the men in khaki.

Stringent laws against vice will be discussed before the legislative committees of the General Assembly, and the bill requiring physicians to report venereal diseases will be a companion measure to the other social evil bills to be introduced this winter at Jefferson City sponsored by the Children's Code Commission.

Bills to recognize the chiropractor and the optometrist again have been drafted and will be introduced in both branches of the Assembly. These measures come up with every session of the legislature. Two years ago much scandal was connected with these proposed acts. Grand juries in several sections of the state made extensive inquiries of the rumors that money was used to try and have them receive favorable consideration.

The usual lobbyist will try and have the chiropractor and optometrist recognized this winter.

Members of the Missouri State Medical Association and the state board of health will again oppose them, and probably will be successful in again defeating such legislation.

There are many new faces in the House and Senate this winter. Some of these lawmakers know very little regarding the chiropractor and the optometrist.

Two years ago some of the members of the legislature received free treatment from chiropractors who were here acting as lobbyists. For a while it appeared that the chiropractor bill would become a law but when the medical fraternity showed the strength of its opposition the bills were promptly defeated. The present Assembly will last four months as it is a revision session. The problem of prohibition as to the ratification of the federal dry amendment is over, and the legislature will pass much good legislation, but the medical fraternity should "prescribe" for our "ills" early in the session so that lawmakers can compound the real cures early through the enactment of good health laws that will be beneficial to all Missourians.

### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY

Abrams, S. F., St. Louis; Albers, E. A., Kansas City; Alder, A. E., Cane Hill; Allen, C. H., Odessa; Ambrose, O. A., St. Louis; Anderson, A. L., Springfield.

Back, G. C., Zahma; Bailey, W. T., Cassville; Baird, J. E., Excelsior Springs; Barnum, K. R., Sedalia; Beaty, J. G., Clinton; Belshe, G. W., Trenton; Birchett, J. G., Cardwell; Blacklock, D. E., King City; Blackman, C. S., Parma; Blackmore, T. A., Windsor; Box, Ernest M., Springfield; Briggs, G. Y., St. Louis; Brown, F. H., Billings; Brownfield, S. T., Brookfield; Buck, S. B., Anderson; Buren, C. R., Princeton; Buhman, R., St. Louis; Byler, W. T., Kansas City.

Cater, R. M., New Hampton; Chalkley, A. J., Lexington; Chamberlain, O. M., Rockport; Chipp, J. K., New Hampton; Clark, E. H., Kansas City; Clark, H. R., Pierce City; Clark, W. J., Maysville; Clemens, J. R., St. Louis; Clendening, L., Kansas City; Clint, Morgan L., Meadville; Cook, E. P., St. Joseph; Coon, E. H., Grand Pass; Courshon, A. J., Williamsburg; Cox, S. S., Wellsville; Crooks, O. R., Kansas City; Cullers, C. H., Spickard; Czarlinsky, H., Kansas City.

Daley, L. M., Hamilton; Dandurant, L. J., St. Joseph; Davie, J., Davis, F. L., St. Louis; Dean, L. E., Maryville; Decker, A. J., Gray Bridge; DeMenil, H. N., St. Louis; Dersheimer, G. V., Kansas City; Detweiler, A. J., Columbia; Dod, F. L., Greenwood; Doll, J. E., St. Louis; Doyle, J. M., St. Joseph; Dudley, C. R., St. Louis; Durham, S. L., Dearborn.

Eads, L. J., Hamilton; Ebeling, A. W., Warrenton; Emerson, B. H., Stockton; Eure, J. B., Poplar Bluff; Eyerman, E. H., St. Louis.

Farr, F. F., Kansas City; Ferguson, W. J., Sedalia; Fore, T. P., Brookfield; Frame, H. G., Mountain Grove; Francis, H. H., Centertown; Frischer, J., Kansas City.

Garlitz, Arnold W., St. Louis; Gay, R. W., Ironton; Gettys, H. B., Glaser, M. J., St. Louis; Gossow, A. A., St. Charles; Grace, T. W., Excelsior Springs; Gregg, A. M., Joplin; Gross, J. H., St. Louis; Grote, O. A., Moberly; Guhman, C. N., St. Louis; Gullic, J. F., Koshkonong; Guy, R. J., Paynesville; Gzell, R., St. Louis.

Hale, T. H., Hall, K. H., Halley, C. D., Hamel, A. H., St. Louis; Hamilton, George M., Coffman; Hancks, J. A., Koenig; Hanser, H. A., Harris, Rufus C., St. Louis; Harrison, A. W., Warrensburg; Harrison, E. F., Kennett; Harrison, J. F., Mexico; Haw, U. P., Benton; Hawkins, W. R., Glasgow; Hayman, A. T., St. Louis; Hearst, Allen L., Kansas City; Heid, L. L., St. Louis; Henson, L. L., West Eminence; Hickerson, J. T., Centralia; Hurwitz, L., Joplin; Hyland, R. F., St. Louis.

Jackson, J. D., Kansas City; Johnson, S. R., St. Charles.

Kelly, B. B., Purdy; Kennedy, J. J., Frankford; Kimball, A. C., St. Louis; King, W. R., Joplin; Knecht, Louis B., Poplar Bluff; Knox, A. C., Kansas City; Koenig, G. H., Koessel, A. W., Konzelman, J. A., St. Louis.

Lake, N. E., Kansas City; Lamson, R. C., Neosho; Lane, H. H., Lewis, Ned O., Kansas City; Levin, Sidney S., St. Louis; Lieberman, B. A., Kansas City; Loew, E. C., St. Louis; Locker, George F., Iantha; Lotz, J. A., St. Louis; Lowder, O. H., Moselle.

McCall, O. S., Wheaton; McDonald, F. R., St. Joseph; McLarney, J. T., Brookfield; McNay, A. L., Pacific; McNees, A. J., Clinton; Mackey, John F., Kansas City; Martin, C. P., St. Louis; Miller, W. H., Kansas City; Mitchell, G. B., Branson; Moore, R. D., Clayton; Morey, O. T., Salisbury; Moskop, P. G., Mulach, A. A., Muller, Carl J., St. Louis; Musgrave, J. E., Excelsior Springs.

Niedringhaus, R. E., St. Louis; Noe, Lafayette, Novelty.

O'Kelley, F. M., Carterville; Ousley, James W., Kansas City; Owens, N. O., Ea Grange.

Parker, E. L., Excelsior Springs; Parrish, S. M., Smithton; Paugh, P. G., Peden, S. E., St. Louis; Pickett, C. P., Mercer; Pope, C. H., St. Louis; Potter, A. E., Ebenezer; Potts, J. F., St. Louis; Presnell, C. C., Charleston; Proetz, A. N., St. Louis; Proud, W. C., St. Joseph.

Rawlins, E. V. H., Appleton City; Reider, C. R., St. Louis; Robertson, R. C., Aurora; Robinson, E. E., Adrian; Robinson, R. R., Hallsville; Rogers, M. W., Princeton; Rolens, Louis E., Dixon; Roseberry, E. M., Neosho; Roselle, T. A., Palmyra; Rosson, J. K., Pascola; Ruble, E. L., Russell, D. R., Kansas City; Russell, M. M., Chillicothe; Russell, S. A., Fairview.

Salisbury, W. L., St. Louis; Sams, W. M., Kansas City; Sauer, W. E., Scherer, P. H., Schreiber, Louis W., Schuck, A., St. Louis; Scott, J. B., Marceline; Sharpe, N. W., St. Louis; Sherman, C. A., Kansas City; Shirley, G. H., Bagnell; Shrader, E. W., Moberly; Shumate, L. S., Reeds Spring; Simmons, B. B., St. Joseph; Smart, R. W., Crane; Smith, Charles A., Osceola; Smith, O. A., Farmington; Spencer, F. H., St. Joseph; Standly, E. D., Brookfield; Strieby, U. G., Brownington; Suggett, O. L., St. Louis.

Trader, C. B., Sedalia; Traubitz, A., Vanduser; Turley, J. G., Desloge; Turner, R., St. Louis.

Upshaw, O. T., St. Louis.

Vanorden, H. F., Kansas City; Vaughn, S. C., Hurricane; Vezeau, S., St. Louis.

Walker, J. M., Wallendorf, L. H., Kansas City; Walsh, L. S. N., St. Louis; Weir, L. R., Lathrop; Werner, C. H., St. Joseph; Wilsey, A. R., Hurdland; Wright, G. D., St. Joseph.

Zoglin, N., Kansas City.

### SYNTHESIS OF PALEONTOLOGY AND MEDICAL HISTORY

The study of the ancient evidences of disease, for which the term paleopathology was proposed by Ruffer in 1914 during his studies on the pathology of ancient Egyptian mummies, is a phase of medical history which must depend on paleontological data for its extension. That pathological lesions, especially those on the bones, retain all of their characteristics after many hundreds of thousands and millions of years has been clearly shown and distinct evidences of disease are known as far back in geological time as the Carboniferous. Evidences of traumatism, fractures with the formation of callusities on the inner surfaces of the shells of brachiopods have been seen as old as the middle of the Ordovician. Reasoning from the theoretical aspects of paleopath-



ology, on the basis of possible parasitism of early hosts, disease may have originated in the Archeozoic but there is no definite recorded evidence prior to the Pennsylvanian.

The relation of paleontological data to medical history is based on the assumption that the manifestations of disease are the same whether seen on man or in animals, and the infection of a Cambrian crustacean by Protozoa is as much a matter of medical history as the presence of osteophytes on the femur of *Pithecanthropus*, the fractured ulna of the Neanderthal man, or bilharziosis among ancient Egyptians.

Many lesions are so commonly seen among fossil vertebrates especially that paleontologists have not referred to them at all, or merely mentioned them incidentally, forgetting that such evidences are of extreme importance in tracing the origin and antiquity of phenomena which are of such vital importance to humanity today.

The importance of paleopathology is that it gives an opportunity of studying evidences of disease over a great period of time, and especially is this true in regard to the data offered by paleontology. That the study of these evidences may aid in the solutions of problems which are at present not solved is evident when we consider that many epidemics which sweep the world, such as the one just past, are doubtless the result of an accumulation of changes over a long period of time. It is well known in medical history how whole populations have been swept away by scourges, which, had the people understood them, could have been avoided, and in the future when we come to understand all of the events of past history we may be better prepared to avoid future conditions of a like nature.

A disadvantage under which the student of paleopathology works is that the results of epidemics are scarcely ever recorded especially in paleontological material. The presence of tsetse flies in the Oligocene of Colorado suggests the possibility of trypanosomiasis among the herds of artiodactyls and perissodactyls of the early Tertiary but it can be considered merely suggestive. The search for such evidences is, however, just begun, and we may in future learn more of the epidemics which, in the past, must have swept through the herds of early animals.

The careful description, illustration and study of ancient cases of fracture, of diseased bones or any evidences of pathology is extremely desirable and will advance the study of paleopathology. Evidences of disease may be detected in the positions assumed by animals at death, the opisthotonos, the pleurothotonos and related phenomena. It is a question open to discussion whether the opisthotonic attitude is a manifestation of disease, but it is as suggestive of neurotoxic disturbances as may well be. Whether the position assumed by the fossilized skeleton is the same as the animal assumed at death, how much is due to shifting before fossilization, are matters of minor importance to the student of medical history who is chiefly impressed with the fact that a dinosaur preserved in the opisthotonic attitude suggests to him the spasms seen in many recent diseases. The student of medical history is interested in a Mesozoic fracture because it extends his knowledge of traumatism, and if the study of the fracture is complete it adds to his knowledge of general pathology.

The relation of disease to extinction, and other more important relations, may be cleared to some extent by a study of paleontological material. The part disease has played in the evolution of forms, whether retarding, changing, or ending their development also attracts the attention of the student of paleopathology.

Medical history, like all other histories, is based on an accumulation of data from widely different fields, and it is the privilege of paleontologists to add to the great wealth already accumulated, more data

as to what happened among the animals with which they are familiar, representing the inhabitants of the earth millions of years ago. The subject is worthy of more careful consideration than has been given it in the past. Paleopathology has attracted scant attention among paleontologists but eminent students such as Cuvier, Soemmering, Goldfuss, Schmerling, Leidy, Williston have found the subject of interest. It remained for the men who had been trained in pathology, men like von Walther, Mayer and Virchow, to show the exact relation of pathological lesions among extinct animals to the general problems of disease which are interesting men today.—Roy L. Moore, in *Science*.

#### MISSOURI STATE COMMITTEE MEDICAL SECTION COUNCIL OF NATIONAL DEFENSE RESOLUTIONS

In view of the fact that our public health is the nation's greatest asset, and realizing our present statutory deficiencies for protecting the same as indicated by recent emergencies and statistics available since the outbreak of the war, and

WHEREAS, The military efficiency of the United States has been seriously impaired by reason of the prevalence of communicable diseases, particularly venereal diseases, from which eleven per cent. of the men in the first draft inducted into service were infected, and

WHEREAS, Upon the representation of the Surgeon-Generals of the Army, Navy and United States Public Health Service, the foregoing conditions having been determined, the Congress found it necessary to appropriate \$1,000,000 for combating venereal diseases, this sum to be apportioned to the states according to their population and available only to such states as possess and have in operation a venereal disease reporting law, and

WHEREAS, The state of Missouri not having at present such laws or statutes by which the Missouri State Board of Health can issue rules and regulations for the control and suppression of venereal diseases, the state's quota of the appropriation is denied, and

WHEREAS, It is an obvious fact that the money expended from this or other appropriations for this purpose not only affects men going into the service, but the men, women and children of our state, by which it will assist in relieving the suffering of the citizens, and the financial burdens of the state in caring for the inmates of the state's eleemosynary institutions, where approximately 25 per cent. of the inmates are found to be in their present condition due directly to syphilis, therefore, be it

*Resolved*, That his Excellency, Hon. Frederick D. Gardner, governor of the great commonwealth of Missouri, be respectfully urged to include in his program of legislation for submission to the coming legislature:

First—Laws empowering the State Board of Health, for the better protection of the public health, to determine the reportable communicable diseases and to require that such be reported under penalty for noncompliance.

Second—To delegate to that body adequate and full supervision of all public health work throughout the state, whereby the present emergency and future emergencies of similar nature can be met.

Third—That a special fund be appropriated and placed at the disposal of the State Board of Health for cooperation with such allotments due from the federal appropriation as are made available by the passage of the Kahn-Chamberlain Act and which cannot now be placed at the disposal of the Missouri State Board of Health because of the failure to provide statutory power by which the State Board of Health can comply with the provisions imposed.



## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1919

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Dec. 14, 1918.  
Cedar County Medical Society, Dec. 30, 1918.  
Vernon County Medical Society, Jan. 20, 1919.

### ST. LOUIS MEDICAL SOCIETY

#### Meeting of the General Society, Dec. 7, 1918

The meeting was called to order at 9:05 p. m., by the president, Dr. Elsworth S. Smith.

The pictures entitled "Fit to Fight" were shown before the regular order of business.

The reading of the minutes of November 23 and 30 were read and approved.

Discussion on the influenza situation was participated in by Drs. George Ives, Louis C. Boisliniere, E. Lee Myers, Major Bahrenburg and Captain Hamel.

On motion the action of the Council in appointing acting councilors to serve in the absence of the councilors in active service was ratified by the Society.

On motion the Society also ratified the action of the Council in making a loan of \$2,000 for ninety days at 6 per cent. interest, to be renewed if necessary.

Dr. Glasgow moved that the St. Louis Medical Society send a protest to Washington with reference to the retaining of nurses at base hospitals and cantonments when there is such a demand for them at home. Seconded and carried.

#### Meeting of the Council, Dec. 11, 1918

The meeting was called to order at 9 p. m. by the chairman, Dr. Elsworth S. Smith. The minutes of the special meetings of November 25 and November 29, and the regular meeting of November 13 were read, corrected and approved.

Dr. Elsworth S. Smith was elected a delegate to represent the St. Louis Medical Society in the Housing Conference of the St. Louis Chamber of Commerce.

In the absence of any representative of the Membership Committee the Council constituted itself a committee of the whole to act on names of applicants. On motion Dr. Smith was elected chairman. The following were elected to active membership: Drs. Joseph Archibald and Gregory S. Miller.

The following names were referred back to the Membership Committee for further investigation: Drs. George Mellies, Emil Boehm, H. R. Backhusen, F. L. Morse, Florence H. Bullis, J. G. Heinrichs, S. J. King, I. C. McIntyre, O. D. Meyer, Richard Phelan, Emma Phelan, Frank J. Stanze, Charles M. Yaley, M. G. Breed and J. M. Bradley. On ballot the application of Dr. Herman G. Grosby was rejected. The secretary was instructed to write to Howard University at Washington, D. C., to ascertain if Dr. Grosby was a graduate of that institution.

Dr. Engelbach reported orally for the program committee, stating that Dr. Frank N. Smithies of Chicago, would be the guest of the Society on Saturday, December 14. He further reported that the program was filled up to Feb. 1, 1919.

On motion the library committee was authorized to renew subscriptions of German periodicals for 1919, and to pay the bills already received for the 1918 journals. Dr. Funkhouser requested that he be recorded as voting no on the foregoing.

The Bartscher Fund Report was read by the sec-

retary. The report was adopted. Dr. Murphy read the treasurer's report, which was accepted.

The president and secretary were appointed with the Hospitality Committee to arrange for the annual meeting.

After a few remarks by the incoming president, asking the support of the Council in his efforts to make the next administration a successful one, the meeting adjourned.

Councilors present: Drs. Boisliniere, Funkhouser, Hill, Newman, Kuhlmann, Caulk, Smith and Koetter. Councilors absent: Drs. Engman, Bliss, Kane, J. Campbell Smith, Cale and Tupper.

Visitors present: Drs. Engelbach and Murphy.

#### Meeting of the General Society, Dec. 14, 1918

Dr. C. M. T. Klie presented a case of hydatid mole.

The scientific program consisted of the following: "A Treatment of Gastric Ulcer in the Light of the Newer Physiological, Clinical and Pathological Investigations," illustrated with lantern slides, by Dr. Frank Smithies of Chicago. Discussion by Drs. Horace Soper, George Dock, William Engelbach and M. J. Lippe.

On motion Dr. Frank Smithies was elected an honorary member.

Dr. A. E. Horwitz presented the following resolution, which was adopted:

WHEREAS, The opinion expressed and the discussions elicited by the papers of Drs. John Green, Jr., and Alexander E. Horwitz on Nov. 23, 1918, tend to show the need of special schools for half-sighted and crippled children in the city, and

WHEREAS, The members of the school board present at this meeting appeared in sympathy with the movement and willing to cooperate, therefore be it

*Resolved*, That a committee of three be appointed by the St. Louis Medical Society to cooperate with a similar committee to be appointed by the School Board of the City of St. Louis whose duty it shall be to obtain a complete census of all half-sighted and all crippled children of school age residing in the city, with the further object of recommending school and educational facilities for these children.

#### Meeting of the General Society, Dec. 21, 1918

The meeting was called to order at 9 p. m. by Dr. M. A. Hoge, in the absence of the president. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following: "Acute Hemorrhagic Pancreatitis—Presentation of Case and Specimen," by Dr. Carroll Smith. Discussion by Drs. Wm. Engelbach and Hudson Talbott; Dr. Smith closing.

"Psychoses Complicating Influenza," by Dr. Francis M. Barnes, Jr. Discussion by Drs. M. A. Bliss and Wm. Engelbach; Dr. Barnes closing.

A letter from Col. R. B. Miller of the Surgeon-General's Office in answer to the Society's protest against retaining nurses in the cantonments and base hospitals was read, stating that over 2,000 nurses had been released from the service in the Army Nurses Corps since the signing of the armistice, and that a reduction of the force was going on daily, but that a sufficient number must be retained to care for the thousands of sick who are shortly to return for treatment.

Attendance 24.

#### Annual Meeting of the General Society, Jan. 4, 1919

The meeting was called to order at 9:15 p.m. by the president, Dr. Elsworth S. Smith. The minutes of the previous meeting were read and approved.

Dr. Falk moved that the By-Laws be suspended

and that the reading of the reports of officers and committees be dispensed with and the reports published in the Bulletin. Seconded and carried.

Dr. Smith delivered an address on the activities of the Society during 1918, and introduced the president-elect, Dr. Wm. Engelbach, who was escorted to the chair by Drs. Horace Soper and Wm. H. Vogt. Dr. Engelbach then delivered his inaugural address.

The chair stated that the first vice president, Dr. Rudolph Vitt, was absent on account of illness and introduced the second vice president, Dr. George F. Chopin, and the secretary-elect, Dr. Albert F. Koetter.

Dr. Talbott moved that the president appoint a committee to provide means for immediate liquidation of the deficit facing the Society by volunteer subscriptions of the members of the Society who are not in active military service. Seconded and carried.

The entertainment for the evening consisted of the following:

Mrs. Carroll Smith sang, "The Sea Gypsy," by Chase and "Believe Me If All Those Endearing Charms," by Page.

Mrs. Albert E. Meisenbach sang, "Carmena," by Lane, accompanied by Mrs. Carl J. Luyties.

Capt. H. W. Lyman demonstrated with moving pictures some of the detail workings of the research laboratory in connection with the air service division, U. S. Army, Mincola, L. I.

A vote of thanks was extended to the ladies and members participating in the program.

The Society then adjourned to the parlors where refreshments were served.

Attendance 200.

ALBERT F. KOETTER, M.D., Secretary.

## BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held in the assembly room of the Public Library, Wednesday evening, Jan. 8, 1919, the president, Dr. Daniel Morton in the chair. Eighteen members were present. The minutes of the previous meeting were read and approved.

Following the retiring president's address, the new president, Dr. A. B. McGlothlan, was introduced and presided.

The annual reports of the secretary and treasurer were read and the latter was referred to the executive committee for investigation and report.

On motion of Dr. J. M. Bell, which carried, the money set aside in the treasury for an entertainment fund ceased to exist as a separate fund.

On motion of Dr. Morton, seconded by Dr. Bansch, which carried, the library committee was authorized to expend a sufficient sum to continue the library subscription list as selected by them.

The following resolution by Dr. J. M. Bell, seconded by Dr. Daniel Morton, was adopted:

The subscriptions to the Clinico Films be ordered renewed, the use of fifteen films within twelve months to cost \$100, half of this amount to be raised by subscriptions and the other half to be taken from the treasury.

A resolution introduced by Dr. Daniel Morton, which carried, authorized the executive committee to revise the by-laws.

The chairman was authorized to appoint a committee of three for the purpose of revising the fee bill and report back to the society. This committee was appointed as follows: Drs. Morton, Leonard, Bell.

On motion by Dr. Leonard, seconded by Dr. Spencer and carried the Public Health and Legislation Committee was instructed to investigate physicians engaged in illegal advertising in our city.

W. F. GOETZ, M.D., Secretary.

## CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society held its last meeting of the year 1918 at the Major Hotel in Liberty, Monday evening, Dec. 30.

The following officers were elected for 1919: President, J. E. Musgrave, Excelsior Springs; vice-president, E. C. Hill, Smithville; secretary-treasurer, J. J. Gaines, Excelsior Springs; censor, three years, W. J. James, Excelsior Springs; delegate, F. H. Matthews, Liberty; alternate, C. H. Suddarth, Excelsior Springs.

A resolution to pay the state and county dues of members overseas was adopted. A motion to meet every two months, during 1919, alternating as usual between Excelsior Springs and Liberty, carried.

A resolution to contribute to State Medical Defense Committee \$1 per month till discharge of committee carried. Dr. Matthews volunteered to pay the amount and collect from members in reimbursement and it was so ordered.

A rising vote of thanks was extended the Major Hotel for its hospitable treatment during the past year.

The secretary read at length a résumé of the year's work and ventured to say that the coming year is one of reconstruction for the Society. The cooperation of every member will be needed. The large lymphocyte has no place in the medical capillary. The "nincumpoop" and the "sand-bag" are no good, only as ballast and county medical societies need no ballast.

Our boys, who volunteered almost to a man, received a share of the secretary's report, in discussing the effects of the war on the Society.

While our ranks have been decimated there have been no casualties. We are proud of our volunteers and shall welcome them home as men who have stepped out to the aid of American heroes in their time of dire need. How we envy them! And still, we old fellows who stayed take just a little pride unto ourselves in that we never have slacked when our withering hand was asked to delve in the limit of its capacity in our purse.

The attention of the Society was again called to the deplorable fact that licentiates of our State Board of Health are daily employing solicitors in Excelsior Springs without restraint or question. Fake institutions occupy offices and practice medicine as heartily as any regular practitioner might do. They "dig their holes unscared" so far as any effort at prosecution is concerned. Nobody concerned in the enforcement of the laws seems to lose any sleep.

The State Medical Association meets in Excelsior Springs in May, 1919. This promises to be our banner meeting. To welcome those boys back! To usher in a century of peace! To plan a campaign of education of the masses, that the new world may enjoy life, now that we are entering on it. Make your arrangements to come.

Dues for 1919 are due now. Start the New Year right.

J. J. GAINES, M.D., Secretary.

## PEMISCOT COUNTY MEDICAL SOCIETY

Pemiscot County Medical Society met in the office of Drs. Luten and Hall, Caruthersville, Tuesday, January 7, Dr. Crowe acting as president in the absence of Dr. Robinson.

The following members were present: Drs. Crowe, Granger, Johnson, Cooper, Hudgins, Luten, Hall, and Dr. Brannon of Hayti, formerly of St. Louis.

A paper on "Puerperal Eclampsia" was read by Dr. L. E. Cooper and discussed by Drs. Luten, Hudgins and Cooper.

The Society voted to pay the dues of its members who are in service.



The election was held and the following officers were elected: President, Dr. J. W. Johnson, Hayti; vice-president, Dr. J. B. Luten, Caruthersville; secretary, Dr. L. E. Cooper, Cooter; treasurer, Dr. W. A. Swaengen, Caruthersville; delegate, Dr. J. B. Luten, Caruthersville.

#### PIKE COUNTY MEDICAL SOCIETY

The Pike County Medical Society met in regular session at Clarksville, Jan. 6, 1919, Dr. T. Guy Hetherlin presiding. The following members were present: Drs. J. E. Bankhead, Clarksville; T. Guy Hetherlin, Louisiana; C. L. Bankhead, Paynesville; P. P. Burton, Louisiana; Dan Fortune, Clarksville.

No vice-presidents having been elected at the December meeting, the following members were nominated and elected: Dr. J. E. Bankhead, first vice president; Dr. M. D. Pearson, second vice president.

Dr. T. Guy Hetherlin read a very interesting paper on "Influenza." This was followed by a general discussion by the members present.

Dr. J. E. Bankhead, Clarksville, was appointed delegate to attend the coming state meeting to be held at Excelsior Springs.

There being no further business, the meeting adjourned. The next meeting will be held at Clarksville.

DAN FORTUNE, M.D., Secretary.

#### ST. LOUIS COUNTY MEDICAL SOCIETY

On account of all the doctors being busy during the month of December with the influenza epidemic, the regular annual meeting and banquet of the Society was postponed until Jan. 8, 1919, when it assembled at the residence of Dr. Cape in Maplewood at 6:30 p. m.

After a sumptuous dinner which was thoroughly appreciated by everyone present, the Society was called to order by President Reynolds at 9:30 p. m., the following members being present: Drs. Miles, Reynolds, Corley, Dunnivant, Ewing, Martin, Sutter, Eggers, Pritchard, Denny, Conway, O'Malley, North Westrup, Jones, Townsend, Cape.

The minutes of the two previous meetings were read and approved.

The applications of Drs. B. G. Benson and F. C. Ewing of Webster Groves were presented. Dr. Ewing, having for many years been a corresponding member of this Society, his application was acted on and he was received as a full member. That of Dr. Benson, which was by transfer card from the St. Louis Medical Society, in accordance with the established custom of the Society, was laid over until the next regular meeting.

A letter from Health Commissioner Eggers thanking the Society for its hearty cooperation with him in combating the recent influenza epidemic was read.

A general discussion then followed as to the duty of the Society in caring for the practices of members who are absent in the United States Service. The general consensus of opinion was that it was incumbent on the members to care for these practices until those members had been regularly discharged from such service unless they voluntarily remained in service or located elsewhere, in which case such obligation would cease. In order to get authentic information on this subject the secretary was instructed to correspond with these absent members and ascertain their intentions; whether to remain in the service, locate elsewhere or to return home as soon as released to resume their practices.

The Society then heard a short report from the secretary giving a résumé of the various activities of the Society during the past year and its present status in membership and finances, which report was accepted.

A resolution was introduced and carried that beginning with the year 1919 the secretary be paid as compensation for his services the sum of \$12 per annum, or \$1 per regular meeting in addition to the remission of his local dues and payment by the Society of his state dues. A motion was made and carried that the secretary be presented with a ten dollar gold piece as a token of recognition of his services in carrying forward various war activities sponsored by the Society during the past year.

The Society then proceeded to the election of officers for the year 1919, electing the following: president, Dr. Horine Miles of Webster Groves; vice president, Dr. F. C. Ewing of Webster Groves; secretary-treasurer, Dr. Arthur Conway of Webster Groves; censor to serve three years, Dr. Wm. R. North of Webster Groves; censor to fill the term of Dr. R. D. Moore now absent in United States Service, which expires Dec. 31, 1919, Dr. C. A. P. Dunnivant of Kirkwood.

After an extended general discussion of the duties of the Committee on Public Health and Legislation and the work before it, the president announced his appointment of the following members on that committee: Dr. R. B. Denny of Crece Coeur; Dr. S. H. Reynolds of Maplewood; Dr. A. W. Westrup of Webster Groves.

Business was then followed by a social meeting and the Society adjourned "in the wee sma' hours" with a general consensus of opinion that this was one of the most pleasant and profitable annual meetings ever held by the Society.

S. H. REYNOLDS, M.D., President.

#### VERNON COUNTY MEDICAL SOCIETY

The Vernon County Medical Society assembled in Nevada at the Court House on the night of Monday, Dec. 30, 1918, to consider in symposium the subject of influenza. Owing to the boisterous condition of the weather only a few of the physicians living away from Nevada were present. The program was as follows:

History of Influenza, by Dr. E. A. Dulin. Definition and Etiology, by Dr. I. W. Amerman. Symptomatology, Complications and Sequelae, by Dr. M. Yater. Diagnosis and Prognosis, by Dr. G. C. Willson. Treatment, by Dr. C. B. Davis.

The discussion of each section was quite general and highly profitable. Of course, the treatment of influenza and its complications were the most interesting and entertaining points. Dr. Davis stated he had used the vaccines in the cases that came under his care at the State Hospital with marked success as a preventive. Dr. Brown had used them without success both as a prophylactic and therapeutically. Dr. Cline of Appleton City saw no good results from their use. Dr. Willson thought the quinin and Dover's powder with perhaps strychnin as good as any remedy. Dr. Amerman believed that in the pneumonia of influenza nothing is as valuable as equal parts of tincture codine and glycerin applied to the chest. Dr. Dulin had not much faith in the efficiency of serums or vaccines in this disease and stated the U. S. Public Health Service said: "If any specific like a vaccine or serum is found to have value the Public Health Service will give the matter wide publicity." So far it has not given this publicity. Dr. Yater had used the Mayo preparation on himself and others and thinks it has virtue. Dr. McLemore took a philosophical view of the question and stated that as the cause of this epidemic had not been detected, therefore no serum or vaccine is possible, but that for pneumonia one has been developed. Dr. Dulin called the attention of the Society to the value of early alkalinization of the blood throughout every attack of pneumonia, of influenza, and of mixed infection.

Those present at this meeting were Dr. Cline and daughter and Dr. Smith of Appleton City; Dr. H. D. Lees of Esmond, N. D., who married a Nevada girl, is here with his wife on a visit to his wife's people; Dr. Williams of Eldorado, Mo., also Drs. Stebbins, Wilson, Dulin, Hornback, Craig, Yater, McLemore, Davis, Amerman and Brown of Nevada. Dr. Hornback provided a box of very fine apples and one of cigars, which were enjoyed.

A committee was appointed to prepare resolutions concerning the death of Dr. G. N. Petty, a former president of this Society who was also at the time of his death, registrar for this county and the most active and enthusiastic city health officer this city ever had.

It was thought best to postpone the election of officers for 1919 until February next, when it is hoped for a full attendance.

On motion of Dr. Dulin the Missouri State Committee Medical Section Council of National Defense was allowed \$3 as balance due for 1918. Resolutions were passed urging the Governor to include in his program of legislation for submission to the coming legislature certain recommendations concerning reportable communicable diseases, etc.

The Society ordered the dues of its members who are in active service in the war to be paid out of the funds of the Society.

The Society then adjourned until the February meeting. J. T. HORNBACK, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1918, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**EMETINE BISMUTH IODIDE.**—A complex iodide of emetine and bismuth containing from 17 to 23 per cent. of emetine and from 15 to 20 per cent. of bismuth. It has the action of emetine, but when taken by mouth, it is less likely to cause vomiting than the soluble salts of emetine administered orally. It has been used with apparent good results in the treatment of chronic cases and carriers of amebic dysentery, even where the hypodermic administration of emetine has failed. The commonly used dose has been 0.2 gm. (3 grains) daily for four days, either in a single dose at the midday meal or in divided doses.

**EMETINE BISMUTH IODID-ABBOTT.**—A brand of emetine bismuth iodide complying with the N. N. R. standards. The Abbott Laboratories, Chicago.

**BISMUTH EMETINE IODID-MULFORD.**—A brand of emetine bismuth iodide complying with the N. N. R. standards. The H. K. Mulford Co., Philadelphia.

**CACHETS BISMUTH EMETINE IODIDE-MULFORD, 2 GRAINS.**—Each cachet contains 2 grains of bismuth emetine iodide-Mulford. The H. K. Mulford Co., Philadelphia.

**CREOSOTE CARBONATE-S. AND G.**—A brand of creosote carbonate, U. S. P. Schering and Glatz, Inc., New York.

**GUAIACOL CARBONATE-S. AND G.**—A brand of guaiacol carbonate, U. S. P. Schering and Glantz, Inc., New York (*Jour. A. M. A.*, Dec. 14, 1918, p. 1997).

**BENZYL BENZOATE.**—The benzyl alcohol ester of benzoic acid. It lowers the tone of unstriated muscle and has been suggested as a remedy against renal, biliary, uterine and intestinal colic and other spasms

of smooth muscle, including angiospasm. Its clinical use is in the experimental stage. The dose is from 0.3 to 0.5 c.c. (5 to 7 minims). Benzyl benzoate is a liquid at room temperature, insoluble in water, but miscible with alcohol, chloroform and ether.

**BENZYL BENZOATE-H. W. AND D.**—A brand of benzyl benzoate complying with the tests and standards of N. N. R. Hynson, Westcott and Dunning, Baltimore, Md.

**SOLUTION OF BENZYL BENZOATE, MISCIBLE-H. W. AND D.**—A solution of benzyl benzoate-H. W. and D. in 78 gm. ethyl alcohol emulsified with 2 gm. castile soap. It has the actions and uses of benzyl benzoate. Hynson, Westcott and Dunning, Baltimore, Md.

**DIETHYLBARBITURIC ACID-MERCK.**—A brand of barbital complying with the N. N. R. standards. The actions, uses and dosage of barbital (first introduced as veronal) are described in New and Nonofficial Remedies. Merck and Co., New York.

**DIETHYLBARBITURIC ACID-MERCK, 5 GRAINS.**—Each tablet contains 5 grains of diethylbarbituric acid-Merck. Merck and Co., New York.

**SODIUM DIETHYLBARBITURIC ACID-MERCK.**—A brand of barbital sodium complying with the N. N. R. standards. The actions, uses and dosage of barbital sodium are described in New and Nonofficial Remedies. Merck and Co., New York.

**SODIUM DIETHYLBARBITURIC ACID-MERCK TABLETS, 5 GRAINS.**—Each tablet contains 5 grains of sodium diethylbarbituric acid-Merck. Merck and Co., New York (*Jour. A. M. A.*, Dec. 28, 1918, p. 2153).

### PROPAGANDA FOR REFORM

**LEONARD EAR OIL.**—This is an alleged cure for deafness, sold by A. O. Leonard, New York City. Formerly it was sold on the mail-order plan as an accessory to Leonard's Invisible and Antiseptic Ear Drums. Now the "Ear Oil" is sold in drug stores. The Department of Health in the city of New York found it essentially to be liquid petrolatum with camphor, eucalyptol and alcohol emulsified by a soft soap, prosecuted Leonard, and prohibited the sale of the "Ear Oil" in New York City. The sale of the "Ear Oil" has also been prohibited in Cleveland (*Jour. A. M. A.*, Dec. 7, 1918, p. 1932).

**EMETIN BISMUTH IODIDE.**—The Council on Pharmacy and Chemistry reports that because of the apparently good results obtained with it, emetin bismuth iodide has been accepted for New and Nonofficial Remedies. Emetin bismuth iodide is insoluble in water and dilute acids, but is decomposed by alkalis, and thus should pass the stomach unchanged but exert its action in the intestines. Those who have reported on the use of the drug in amebic dysentery report that the disappearance of ameba from stools was generally complete and apparently permanent even in chronic cases of carriers and in cases where the hypodermic administration of emetin has failed. Purging and vomiting, however, are not entirely avoided. The drug is usually given in a single dose of 3 grains at the midday meal for twelve days (*Jour. A. M. A.*, Dec. 14, 1918, p. 2013).

**FACT AND OPINION ON THE INFLUENZA EPIDEMIC.**—At the recent meeting of the American Public Health Association the discussions relative to the etiology of the present epidemic resolved themselves into the belief that the bacillus of influenza is not the primary etiologic factor and that the actual cause is as yet unknown. In the argumentation for and against the



face mask as a means of preventing the spreading of the disease, sight was lost of the fact that definite evidence has been presented to show that the wearing of a mask prevents the diffusion of pathogenic organisms of which we have definite knowledge. A paper was presented which indicated to the satisfaction of most listeners that a significant factor in the spread of the epidemic in army camps was the inadequate washing of mess kits (*Jour. A. M. A.*, Dec. 21, 1918 p. 2074).

**THE GOLDWATER ORDINANCE.**—In 1914 the Department of Health of the City of New York revised the Sanitary Code so as to require that no "patent medicine" should be sold in the city of New York unless the names of the potent ingredients are declared. The ordinance was bitterly fought by the "patent medicine" interests, the fight being led by E. Fougere and Co., E. N. Crittenton Co., and H. Planten and Son. Now the Appellate Court of New York has decided that the ordinance is void, but has upheld the principle that a disclosure of the formula of medicines may be required. The underlying principle of the ordinance was the right on the part of the city to require disclosure of ingredients, and that right the Appellate Court upholds (*Jour. A. M. A.*, Dec. 21, 1918, p. 2093).

**INFLUENZA VACCINE.**—So far but two definite reports of adequately controlled experiments on the use of influenza vaccine appear to have been published. That of Barnes concerned the use of the Leary vaccine, composed of strains of the influenza bacillus, and indicated that the vaccine was not of prophylactic value. The second report, by G. W. McCoy and coworkers, concerned a carefully controlled experiment on the use of a mixed vaccine similar to that brought out by Rosenow, and indicated that this vaccine was not efficacious as a prophylactic against the present epidemic (*Jour. A. M. A.*, Dec. 21, 1918, p. 2094).

## BOOK REVIEWS

### THE ORTHOPEDIC TREATMENT OF GUNSHOT INJURIES.

By Leo Mayer, M.D., Instructor in Orthopedic Surgery, New York Postgraduate Medical School and Hospital, with an introduction by Col. E. G. Brackett, M. C., National Army, Director of Military Orthopedic Surgery. 12mo of 250 pages, with 184 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$2.50 net.

The purpose of this book as set forth by the author in his preface, "to emphasize certain principles and rules of guidance in the treatment of war injuries," is excellently portrayed in the text. In no sense a "treatise on orthopedic surgery," its chief value lies in a clear statement of methods of procedure which are of proven worth and which are so fully understood by the author that he is enabled clearly to analyze them for the benefit of his readers.

The book is divided into two parts. The first, "At the Front," deals with the immediate treatment of injuries to the bones, joints, nerves and soft tissues of the extremities; the second part, "At the Base Hospital," discusses the after-treatment of such injuries. Special attention is given to the methods of preserving and restoring function. The chapter on "Treatment of the Amputated" is especially worthy of close study because here the author emphasizes the duties of the physician which do not end, as is too often the case, with reference of the patient to the brace-maker.

Under the subheadings the subject matter is easy

of access; the many illustrations are well printed and show what they are meant to demonstrate; the general principles underlying nerve and tendon suturing with necessary anatomical considerations are concisely given. While the book is dedicated "to all who by word or deed are striving to aid the cause of the crippled soldier," it cannot fail to be of value to all who use surgery in the art of healing. E. F.

**ROENTGEN DIAGNOSIS OF DISEASES OF THE HEAD.** By Arthur Schuller, head of the Clinic for Nervous Diseases at the Franz-Joseph Ambulatorium, Vienna. Authorized translation by Fred F. Stocking, M.D., M. R. C., with a foreword by Ernest Sachs, M.D., Associate Professor of Surgery in Washington University. Approved for publication by the Surgeon-General of the U. S. Army. St. Louis: C. V. Mosby Company, 1918. Price, \$4.00.

The translation of this book into English should be greatly appreciated, especially by the roentgenologist as it is most often on his experience and judgment that the roentgen-ray diagnosis is made. But while the work will probably be of more interest to the roentgenologist than to the man doing general practice it should be a great service to anyone who is trying to make the correct diagnosis.

The author covers very thoroughly and briefly the normal skull and then goes more into detail on the diseases and roentgen diagnosis of the skull and intracranial conditions.

Dr. Stocking in his preface brings up the very important point of studying stereoscopically all skull radiographs.

The one weak point in the book is the number and character of the reproductions. The number is limited, the author constantly referring his reader to his "Atlas der Schädelbases" for a radiogram of the part under discussion. The sketches accompanying each reproduction are a great help in making the interpretations, which is always difficult in head radiography. A very extensive bibliography follows the text. J. S. A.

**THE NEWER KNOWLEDGE OF NUTRITION.** The Use of Food for the Preservation of Vitality and Health. By E. V. McCollum, School of Hygiene and Public Health, The Johns Hopkins University. Illustrated. New York: The Macmillan Company, 1918. Price, \$1.50.

This is a small book of 200 pages containing well-written chapters on the biologic method of analysis of foodstuff, experimental production of scurvy and the dietary proportions of vegetables, the vegetarian diet, foods of animal origin, the diseases due to faulty diet—the so-called deficiency diseases—the nursing mother as a factor of safety in the nutrition of the suckling, and finally the practical considerations in planning the diet. The book is of great interest, is conservative in tone, simple in language. The argument is clearly summarized in the following statements on pages 148-149:

"Liberal consumption of all the essential constituents of a normal diet, prompt digestion and absorption and prompt evacuation of undigested residue from the intestines before extensive absorption of products of bacterial decomposition of proteins can take place, are the optimum conditions for the maintenance of vigor and the characteristics of youth. Such a dietary régime can be attained only by supplementing the seed products, tubers, roots and meat which must constitute the bulk of the diet of man, with the protective foods, namely, milk and the leafy vegetables."

No better practical advice can briefly be given than the foregoing, leaving the details to be worked out from the experience and common sense of the clinician. This book is to be recommended to every individual who is interested in the up-to-the-minute progress in questions of nutrition. F. C. N.

# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

Volume XVI

CHICAGO, ILL., AND ST. LOUIS, MO., MARCH, 1919

NUMBER 3

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3517 Pine St., St. Louis, Mo.

PUBLICATION COMMITTEE { L. W. CAPE, M.D., Chairman  
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### ORIGINAL ARTICLES

#### FORTY-FOUR CASES OF PREGNANCY TOXEMIA SINCE MAY, 1917

##### Results of Standardized Treatment

GEORGE CLARK MOSHER, M.D.  
KANSAS CITY, MO.

On a brief trip to the hospitals of Chicago we found on taking up the subject at the Chicago Lying-In, Presbyterian, Wesley, Augustana, St. Luke's and Cook County Hospitals, that in each of these maternity services an unusual percentage of pathological cases had been observed during the winter.

During the present winter, the writer himself has had under observation either among his own patients or among those referred or seen in consultation, twenty-two cases of pre-eclamptic toxemia or eclampsia. Since May, 1917, thirty-nine cases have been under treatment. Within the last twelve months five cases of pernicious vomiting have been observed, which is, of course, another type of toxemia of pregnancy.

Now, why there should be in the six weeks from Jan. 1 to Feb. 15, 1918; as many such cases as would ordinarily be met in a year is a mystery. We are at a loss to account for the frequency of toxemia except by charging it either to the extreme changes in temperature from a bitter cold to mild weather and back again just as epidemic jaundice and herpes zoster has in some seasons been ascribed to climatic conditions or else to the nervous unrest and tension from which every sensitive woman suffers on account of our entrance into the war. Nearly every family has some of its younger men in the service, and even those who have not are strung up through such abnormal conditions that the resistance is far easier overcome, and if the patient has a tendency to be under par she loses her equilibrium of absorptions and eliminations.

The insufficient elimination of toxins gen-

erated at the placental site and by the fetus, together with the extra burden thrown on the organism of the mother to provide for oxygenation for herself and the developing child, become greatly increased because of the loss of equilibrium between the surface of the body and the heat centers, owing to extreme cold weather. This may interfere with the metabolism to such a degree as to produce an acidosis as is claimed by Martin Fischer in his argument showing the relation of edema and acidosis. Hence the logical advantage of magnesium sulphate in eclampsia, it being the salt best qualified to overcome edema. Nervous strain produces fatigue, insomnia and faulty metabolism.

Eclampsia, which still claims a death rate of 25 to 40 per cent. by the average statistics, was long ago designated by Zweifel as the disease of theories. We have not been able to reach a basis up to the present day where we could absolutely prove its origin or trace its etiology. The signs and symptoms are, of course, familiar, and the findings at necropsy—liver, kidneys and brain necrosis—we have all seen. From these facts, we gain the clue upon which our plan of treatment is founded, but while experimental evidence and grouped phenomena are helpful, every man draws his own conclusions from the cases he has seen and applies them according to his own mode of reasoning, which may be a temporary theory or it may become an obsession.

As proof of the statement that toxemia is not yet without the bounds of theory, one's attention is called to a most valuable article on "Treatment of Eclampsia," by Dr. J. Clifton Edgar in the *Journal of the American Medical Association* of April 27, 1918. Dr. Edgar says: "A one time advocate of active medical and surgical treatment, and bitterly opposed to morphin in eclampsia, experience in the last five years has radically changed my views and teaching. . . . I also am still uncertain whether morphin increases infant mortality. . . . And also, a one time enthusiast in the free use of veratrum viride in eclampsia, I frankly confess to having changed my views.



I fear its shock-producing effect, although I still occasionally employ it in small doses in selected cases." In other respects Edgar's treatment varies but little from our own established technic.

In a paper by D. M. Erwin of the Department of Pathology, University of Cincinnati, are the results of some striking research work in regard to the relation of blood pressure to convulsions (*Jour. A. M. A.*, April 27, 1918). His contention is that "The chemical substance in the blood only produces edema. The height of the blood pressure over the intracranial is the margin of safety. When this margin is at a small positive quantity the brain must undergo some change. The vasomotor center fags. As a consequence the blood pressure which has been maintained as high as possible to counteract the high intracranial pressure drops. The intracranial pressure now becomes greater than the blood pressure; the margin a negative quantity, the pupils dilate and convulsion comes on; the sharp tense contractions of the muscles play a vicarious part by forcing the blood from the periphery and raising that in the brain until the margin is again positive. With its renewed blood supply the centers again take up for the time their work."

Knowing that next to sepsis, eclampsia is the most deadly of all obstetric complications, every woman has been examined, on coming under observation, with the realization that her symptoms may possibly suggest at any time that she is a pre-eclampsic. As soon as her pregnancy is recognized, blood pressure, eye symptoms and urinalysis are made a routine; the teeth and tonsils inspected for foci of possible infection.

The etiology of eclampsia as formulated into a table of relative values is as follows:

1. Failure of elimination of toxins. These in the early months are doubtless due to the placenta, and in the second half of pregnancy doubtless to the excretions of the fetus.

2. Infections of various types throw a burden on the pregnant woman.

3. We have an asphyxia of greater or less degree, resulting from pressure and from stasis with a decrease of normal power of maternal oxygenation, thus interfering with lung expansion and with the action of the heart.

LaVake has pictured a pregnant woman who has thus thrown a double load on the excretory organs.

The patient who has had scarlet fever or some similar disease is handicapped in the elimination of bacteria or their toxins, which emanate from such foci as infected tonsils, teeth, or from colon bacillus. These may further damage her resistance.

The basic feature of etiology is from the placenta or the fetus. The degree to which the

toxins can overwhelm is dependable on two conditions: (1) rapidity of the generation of the toxins, and (2) the compensatory ability shown by the organs of elimination to throw off the poison.

Beyond question there are depressing effects from the presence of the toxin shown by the lesions in kidney, liver and heart. These add to the risk of the pregnant woman.

The fetus makes still heavier demands on the powers of oxygenation on the part of the mother in the later months of pregnancy, and having been reduced by the stasis of the abdominal organs resulting from pressure through the diaphragm this demand is followed by decreased expansion of the lungs and an interference with the cardiac rhythm. This causes a maternal asphyxia of mild type which again lessens resistance and increases the damage to kidneys and liver. Pyorrhea or pyorrhea alveolaris should place the attendant on his guard against his patient developing a later toxemia.

A case of eclampsia will always demonstrate some focus of infection before it develops, and that case which even under careful observation up to the week of delivery should show no signs but the trace of albumin, higher blood pressure and nervous manifestations. In these cases there are evident foci of infection which do not clear up.

Then other cases with temperature manifested before any examination or interference has been attempted are in still a third class; usually multiparas, a number of cases of whom develop toxemia having had a previous normal pregnancy and labor, but a definite history of infection since the last labor. The bowels should move once daily. This removes excretory products, bacteria and toxins from the system, takes stress from the kidneys and saves injury to the intestine, which would result from large hardened masses of feces trying to pass the unusual obstruction and pressure, and thus result in infection of the blood stream.

The hematogenous kidney which has been accurately diagnosed and successfully treated by surgical procedure by Dr. Howard Hill, is ample evidence that colon bacilli do gain access to the blood stream and cause infection of the kidney, through infarcts in its deep structure.

Pressure effects on the bowel also disturb the normal balance of bacterial growth and result in the development of products particularly toxic in nature. Bowels are kept open by fruits, coarse cereals and vegetables; salines when required.

Six and eight glasses of water and milk should be taken. Toxemic patients fare better by eating one meal a day. Exercise and massage to promote general circulation are endorsed. Hemoglobin should be estimated and iron in the food or Blaud's mass given if needed.

The urine should be examined during the first six months, once a month; the last three months twice a month. If any symptoms arise examination should be made daily.

The patient is always instructed to notify her attending physician if any danger signals arise: unilateral headache, edema, disturbed vision, epigastric pain or nausea.

The asphyxia raises the blood pressure of the adrenal glands and as a consequence an extra amount of adrenalin is thrown into the blood stream. As a result of the concentration, acidosis from the increase of acidity takes place. Associated with this asphyxia and output of adrenalin is the increase in the rise of blood pressure and increased coagulability of the blood. These always occur in eclampsia in the later months.

Accepting this rational theory of the production of eclampsia, we have tried to standardize our plan of prophylaxis and treatment as follows:

1. Diet which shall be of non-irritating food.
2. Elimination encouraged by kidney, bowels, skin. Intake and output of fluids is a most important routine and must be shown in a daily consolidate report.
3. All foci of possible infection, tonsils, teeth, kidneys and bowels, should be discovered and eradicated.
4. Deep breathing, by aids to general circulation and by fresh air, avoids danger of asphyxia.
5. Free exhibition of alkali-salts and food anticipates acidosis.
6. Veratrum viride by a system devised to lower blood pressure, reduce the pulse and aid diaphoresis.
7. The emptying of the uterus as a therapeutic measure to be done in the way least conducive to shock is indicated as soon as prophylactic measures fail. Every one at all familiar with the toxemia of pregnancy recognizes the marked improvement of the patient's condition following the removal of the products of conception.

In a most illuminating paper on toxemia (J. Young, *Jour. Obstet. and Gynec. of the British Empire*, July, 1914), claims that hemorrhages, or areas of necrosis, in the placenta, result according to whether vein or artery is affected, and that these result from thromboses in the ovarian and uterine vessels. Toxins are generated in the autolyses of these areas, and these Young holds responsible for the toxemia. This theory, together with that of the infectious origin of eclampsia, recalls the relation of thrombosis and infection and also the high percentage of toxemia of pregnancy and accidental hemorrhage where a focus of infection may actually be demonstrated.

Young shows that toxemias are due to the liberation of products of early autolysis of placenta because associated with recent infarcts of placenta which is so constructed that the dying toxins pass directly into the blood stream.

Experimentally, he isolated from the healthy placenta soluble materials, which injected, caused convulsions and focal necrosis of the liver, and degeneration of the kidneys.

Most eclampsias occur in primiparas, in hydramnios and in multiple pregnancy. These are, of course, patients subject to the greatest pressure and who most frequently suffer from asphyxia.

It is to be remembered that in chloroform poisoning and the lesions from certain types of eclampsia, the liver and kidneys are identically involved. From the experimental discovery of Arthur Dean Bevan, which was shown in an address given before the Jackson County Medical Society at the Kansas City General Hospital in 1913, we conclude that chloroform and eclampsia produce identical injuries, and that chloroform therefore adds to the danger of the eclampsia, and should never be used as an anesthetic in these cases. The fact that the asphyxia from chloroform circulating in the blood increases the lesion, suggests that the diet which protects the liver cell in chloroform poisoning, should be one generous in carbohydrates, and correspondingly low in fats and proteid.

The identity of the kidney lesion of sepsis and eclampsia have long been observed. Martin Fischer in his work on edema and acidosis advises the giving of salts which best overcome edema as asidosis is quite frequent.

In eclampsia we can see why magnesium sulphate is so often the resort, and the reason for its good results in these cases.

That eclampsia may be due to edema of the brain is the contention of Zangermeister. In view of the relation of focal infection to eclampsia and pre-eclamptic toxemia, great stress should be placed on locating all foci of possible infection.

The teeth especially should be examined, and these patients should be advised to consult their dentist throughout pregnancy and be under his care. All visible signs of focal infection and destruction must be treated.

If a patient has a history of rheumatism or muscular pains, teeth in which nerves have been killed should be roentgen-rayed. Teeth which have been crowned are especially under suspicion. "Uneasy lies the tooth which wears a crown." The teeth involved should be removed when symptoms of local systemic absorption are observed. To avoid the severe autovaccination resulting from the removal, they should be removed one at a time. All this is prophylaxis and may prevent toxemia, hemorrhage and abortion.



Since sepsis is found to produce nephritis in the woman not pregnant, how much more likely it is to result in the pregnant patient.

The routine treatment of this group of cases has been milk diet or whey, cereal, sugar and buttermilk, sulphate of magnesia until copious results, elimination by liberal quantities of water, rest in bed, and means of inducing sleep in the pre-eclamptic subjects.

Blood pressure and eye symptoms, together with intake and output of liquids, are carefully watched and recorded, the latter summed up in twenty-four hours contrast. If the blood pressure has been persistent over 150 the advent of eclampsia should be expected, and if rapid pulse and headache were also in evidence and the pressure remains at 180, the emptying of the uterus should be done. The double benefit of this maneuver is that it not only relieves pressure, but also immediately provides for the oxygenation of the child by its own mechanism. A method which will cause the least shock to the nervous system and do the least damage to the soft structures of the pelvic viscera should be selected. In general, this is by the Voorhees bag inserted after gradual preliminary dilatation by Hegar's dilators up to No. 20, which admits the No. 4 bag, rather than by digital dilatation. We have found these patients peculiarly susceptible to sepsis, and if forcible manual dilatation is done and the cervix torn into ribbons, not only is the resulting scar an evidence of wreckage of structure, but immediately the torn parts of the cervix, hanging into the vagina, invite septic infection from outside, and greatly increases the mortality.

Unless these patients die from results of necrosis of liver or brain, the fatality is usually from sepsis. In fact, one of the two deaths in the recent series was due to infection, the patient having been delivered before coming to the hospital. The first seizure was a half hour postpartum. Death followed from general peritonitis and myocarditis.

In the Chicago Lying-In Hospital, the use of hot packs has been abandoned by Dr. DeLee, but the electric pack is still used where a dry hot skin with blood pressure of 180 or over indicates the approach of a convulsion. Solution of soda bicarbonate by mouth or by proctoclysis is depended on as the fluid to preserve an equilibrium between intake and output. All our patients were given ether; in no case was chloroform allowed. Chloral by rectum as a routine sedative was ordered since it does not induce poisoning, contrary to the assertion of some investigators. While an occasional dose of morphin,  $\frac{1}{8}$ , and scopolamin,  $\frac{1}{200}$ , is given, we do not use the Stroganoff method; however, if it will remove the danger of nephritis in the non-pregnant, LaVake asks the pertinent question as to why it is not a prophylaxis against

eclampsia, sepsis, miscarriage and accidental hemorrhage in the pregnant women. He asserts that he has not seen a case of eclampsia in which a focus of infection and usually a marked one could not be demonstrated.

Krause, of El Paso, in a paper before the Jackson County (Mo.) Medical Society, claims that in all the six eclamptic subjects in which he has conducted postmortems, the presence of colon bacilli in the kidney was proved, and he associates eclampsia with colon infections, a suggestion to which his laboratory findings give evidence in his experience.

Hopkins Gardner (*Am. Jour. Obst.*, 1912), conducted experiments which conclusively disposes of the statement that chloral produces the same liver necrosis as chloroform. He also demonstrated the fact that chloral hydrate produces no histological kidney lesion. We have discarded all anesthetics in the convulsion.

Oxygen in the convulsion has been used as an aid to overcome asphyxia. No violent effects should be made to restrain the patient. Magnesium sulphate to free catharsis. Veratrum to keep pulse under 80. If conscious, give the patient chloral 10 to 20 grains and bromid 40 grains by mouth; otherwise by enema, chloral 30 grains and bromid 60 grains.

Murphy drip, soda bicarb. 2 per cent., glucose 6 per cent., should be ordered. If this is rejected, soda sol. by hypodermoclysis, care being exercised to have it sterile. High colon irrigation and the hot pack alternately, every eight hours; the latter only if patient is absorbing plenty of fluids.

When all other means fail to free the system of toxins, we consider the emptying of the uterus as suggested. No bleeding is done, as it has been found that phlebotomy is of no advantage to the average patient. One cannot tell how much blood the patient will lose at delivery. Blood pressure is much better relieved by veratrum—M. V. Q. 4 hours to M. X. V. 9.4 hours for pulse over 100, and M. 3 for pulse over 80 and under 100. Cases not bled recover faster than those bled. Bleeding has done harm; veratrum has never been found a danger.

With a dilated right heart and beginning edema of the lungs and high blood pressure, bleeding is certainly indicated.

As against the Stroganoff method of large doses of morphin, we find emptying the uterus more safe. An initial dose of morphin lessens excitement and may be used. When it is used to slow respiration, morphin increases asphyxia, and the danger to the patient is the consequence. However, Stroganoff has some very wonderful and attractive statistics in favor of his treatment. It is remembered also that several years ago our friend, Dr. Gustav Zinke of Cincinnati was visiting the General Hospital and advised

"hands off" in a case of eclampsia, saying a certain percentage of these die, regardless of treatment. He has long been a champion, with Hirst, of the conservative handling of eclampsia, discouraging the emptying of the uterus as meddlesome midwifery. Our results, however, we believe, justify us in our technic.

There is one class of cases which are peculiarly dangerous and in which it must be recognized that the induction of labor, or any waiting policy, is not to be trusted. This is the fulminating type in primiparas, where one conclusion follows another in rapid succession.

If, in these patients, the cervix is hard and long, the severe effects of continued pounding labor must force the toxins into the blood stream, in such violence, that resistance is broken down through the accession of the toxemia, and the patient will probably die if she goes over three or four hours. In case the cervix is not softened, the delivery in this case should be by cesarean section.

Our duty to these women is two-fold: first, we want to spare their liver, and second, the dictates of the Catholic Church as well as those of humanity appeal to us to spare the liver of the unborn children, as well as the mothers, who are imperiled by the overwhelming storm of toxic material which is so rapidly menacing both victims.

Now, having decided to empty the uterus we have reached the following conclusions as to method. The Voorhees bag is introduced by a technic which has been worked out by the writer, following the example of Dr. Chas. B. Reed of Chicago. We find this means of dilatation less likely to injure the soft structures of the patient, or to be followed by shock or sepsis than by any other procedure.

If the cervix is not softened, we must choose between *accouchement forcé*, a dangerous expedient, producing shock and laceration, inviting infection, on the one hand, and on the other doing a cesarean section, with the added risks involved by the hysterectomy, which are by no means inconsiderable.

In 1916 Dr. Franklin S. Newell, of Harvard, recorded the results of 100 cesarean sections within 40 miles of Boston, not from published reports, but from private information, and the startling discovery is laid bare that where patients have been subjected to repeated examination, and frequent ineffectual attempts made to use forceps, and to do version, and then the section is done, that the mortality is practically 100 per cent. No doubt from such figures Rudolph Holmes has grounds for his warning against indiscriminate cesarean section as a last resort. It has its place as a selected procedure in certain identified cases of eclampsia, and they are limited.

The Voorhees bag introduced by the method mentioned has seldom failed to do the work. We have never had a rupture of the membranes from it, nor have we had a resultant sepsis. The choice of method must of course be determined by the condition of the patient and the experience of the operator.

Prophylaxis and early treatment are the keynote of success. If the patient is under observation early it is believed that probably brain and liver necrosis, infarcts of kidney, and dangerous sequelæ of toxemia may usually be avoided. Diet, milk, cereals and fruits should be ordered. Full movements of the bowels are to be encouraged by 1 oz. magnesium sulphate and 6, 8, and 10 glasses water daily, watching for intake and output of fluids.

If symptoms persist, we advise keeping patient in a well ventilated room with sunshine. She is directed to change position lying, sitting, prone, lateral and knee chest, using calisthenics and massage for exercise.

The dental treatment should be continued at home if necessary.

As a diuretic imperial drink may be ordered; cream of tartar, dr. 3, sugar of milk dr. 4, lemon juice 1 oz. dissolved in 3 pints boiling water; this, if water becomes distasteful.

If patient tires of milk she may have cereal, whey and sugar diet with buttermilk. The object of all this plan is to give a high carbohydrate diet, with low fat, and just enough proteid to balance and sustain nitrogen equilibrium.

According to experimental research by Opie and Alford, carbohydrates have a favorable influence on both pathologic states from toxemia, and chloroform poisoning. Fats have a bad effect as also has proteid. Wash out bowel daily with 2 per cent. soda bicarbonate, taken in knee-chest position; assure plenty of sleep. When the blood pressure, which should always be observed and recorded, remains over 160, the patient is in danger. If it remains over 180 for even a limited period, she is menaced, and at 200 she should be delivered at once.

The albumin index is to be watched, and test tube kept in series so the percentage can be noted daily. If the heat and acid test shows 50 per cent., the patient is considered critical. If it is 85 per cent. when first seen, the uterus must be emptied, if in twenty-four hours tentative treatment with magnesium sulphate and fluids the pulse stays over 90 and pressure over 160. It is always to be borne in mind that these patients are peculiarly prone to sepsis and the danger of interference is to be considered. Of course, eye disturbances and heart changes are also positive indications.

The patient with eclampsia two months before her time is very likely to die if she does not clear up symptoms by prophylaxis and she



should always be in the hospital and under close observation.

Concerning toxic vomiting of pregnancy, five cases, have been under treatment. It is a melancholy picture that confronts one looking back to the old empiric plan or lack of plan by which these unfortunate subjects were managed.

The lighter type finally came through, while the more profoundly poisoned victim either had to submit to therapeutic abortion or wait for a fatal termination. To Dr. John C. Hirst who is associated with Dr. Barton Cooke Hirst, of the University of Pennsylvania, is due the credit of bringing to the profession the value of corpus luteum in pernicious vomiting.

CASE 1.—Mrs. T., wife of a mining engineer of Bartlesville, Okla. Had twice before been a patient of the writer, and each time it was found necessary to empty the uterus after an ineffectual trial of means at hand, to relieve her condition by less drastic measures. Being especially anxious for a child, and after such an experience Mrs. T. came to the hospital last summer, was put to bed for the month, in the second month of her pregnancy, just as the nausea and vomiting seemed to become intolerable. She was given sodium bromid, 60 grains, and chloral, 30 grains by enema, to quiet the nervous excitement. Afterward this dose was reduced to 40 grains of bromid and 20 grains of the chloral p. r. n.

The corpus luteum was given by hypodermic,  $\frac{1}{4}$  c.c. on alternate days, with  $\frac{1}{2}$  c.c. thyroid extract on the succeeding day. This dose was increased to  $\frac{1}{2}$  c.c. of the corpus luteum, and as the effect of the thyroid or her pulse indicated, the latter hypodermic was abandoned. After two weeks the vomiting ceased, and the patient returned home. She went through an uneventful pregnancy, came back to the hospital and was delivered at term of a perfectly normal baby boy, and made a good recovery.

CASE 2.—Mrs. G., from Englewood, had been in a hospital for three weeks and given morphin and other sedatives unavailingly and returned home. Her mother, who had been a patient of the writer in her own lying-in days, brought her to the office, and it was decided to put her on the corpus luteum regime. At the time of admission to the hospital, the only article which was retained at any time was "soda pop," of which concoction many bottles were consumed. Many times this was rejected but no food or drink otherwise was retained even for an instant. In two weeks she returned home after the corpus luteum and thyroid, and was delivered at term; now apparently well.

Two cases at the General Hospital followed the same history and with equal results. Each cleared up in two weeks in bed with corpus luteum.

CASE 3.—On March 12, 1918, Mrs. L. of Okmulgee came into the hospital having been referred by Dr. Mitchner of Okmulgee. Her history as to previous pregnancy was that she was delivered of a girl baby ten years ago, after a stormy experience; the vomiting at times threatened to overwhelm her. Twice subsequently under the care of two different medical attendants, she was relieved by therapeutic abortion which cleared up the symptoms.

The present pregnancy began in a storm of nausea, from which the patient had no relief. She was in bed for four months, coming to the hospital on a stretcher thoroughly exhausted. She was unable to raise her head from the pillow. Vomiting was continuous and some pain was felt, which had caused such alarm that a doctor was called to the train, at

Vinita, on the way up, and a hypodermic injection of morphin was administered.

Her blood pressure was 115 and some edema was found when admitted. The urine was loaded with casts and albumin, and blood persisted in each specimen for the first week. Under a restricted diet, absolute rest in bed, corpus luteum and thyroid extract, bromid and chloral by enema to quiet nervous excitement, the patient gradually improved and she is at this writing able to eat what she desires, is up and about, having left the hospital, to remain at the Muchlebach Hotel, until her accouchement in May.

The remarkable series of cases while it is only five in number is all that have been met in the past year, so it is 100 per cent. success. Of course, one admits it may have been good fortune that these results were obtained, but it must be remembered that it included the cases in series, and what is of more importance in two of them, abortion was done twice before, because it was feared the life of the patient was in grave jeopardy.

Some better plan may be devised for treating this type of toxemia, but up to the present it is certain that none has produced such signal success in results in the hands of the writer.

A selection of cases of pre-eclamptic toxemia and eclampsia which have occurred recently are presented.

CASE 1.—Mrs. O., para 1, aged 32, wife of an Army captain was seen in consultation with Dr. Lothian at 5:30 p. m., January 16. She came from Camp Doniphan, where she had been under treatment which was unsatisfactory, because of the lack of laboratory facilities, and proper food, as well as hygienic means to combat the toxemia. On entering the hospital the patient presented a pathetic picture; semiconscious, suffering from general edema which invaded the larynx and the glottis, and caused a whistling breathing, resembling a child with croup, amblyopia, unilateral headache, epigastric pain, nuchal pain; blood pressure 240 mm., pulse 122, urine loaded with albumin, hyaline and granular casts, scanty and of heavy specific gravity.

After salines the bowels were emptied and the blood pressure was reduced by veratrum viride m. x., to 186 and the pulse to 96. She had a comparatively quiet night, but on January 17, her urine showed albumin 4+, but neither hyaline nor granular casts. Blood pressure went up to 200 and pulse to 102. Veratrum m. x. was followed by a drop to pulse 86, and blood pressure 178. No headache, but patient was perspiring profusely. At 9 p. m. another 10 m. of veratrum was given and the blood pressure recorded was 122 and pulse 68.

The bag was placed at 6:30 a. m. and pains began at 10:30. The cough from the edema of glottis returned, and patient resumed retching and vomiting and became very restless. Veratrum m. 10 was given and the recorded blood pressure was 132; at 12:40 p. m., the blood pressure was again 196, and at 2:30 veratrum m. x. was followed by blood pressure 150. Pains every three minutes and lasting 30 seconds. The bag was expelled at 2:50. At 3:10 a hypodermic of morph. sulph.  $\frac{1}{4}$  and scopolamin  $\frac{1}{600}$  and at 3:35 the recorded blood pressure was 138. She was delivered at 4:52 when the blood pressure was 150, pulse 66, fetal heart 152.

The placenta was sluggish as it is apt to be in these cases and was expelled after  $\frac{1}{2}$  c.c. of pituitrin at 8:45. The pulse remained slow, and perspiration

very profuse, as is often observed after ether. No veratrum was recorded again until the 19th. The baby, which weighed  $5\frac{3}{4}$  pounds, and was at the seventh month, was kept alive by the breast milk of other mothers in the hospital, but finally expired in the third week, evidently from effects of maternal toxemia which it could not throw off. Vision gradually was regained and Mrs. O. could distinguish persons and colors after the tenth day. The blood pressure fluctuated between 130 and 180, pulse averaged 90 and respiration 20. She left the hospital February 6. On March 30, Mrs. O. called at the office and requested permission to return to Camp Doniphan to remain until her husband should start overseas. Vision was good, no headache nor other disturbances. May 1, Mrs. O. called with her husband, and she was apparently well; blood pressure normal, urine negative.

CASE 2.—The wife of Dr. P., aged 26, para 1, had been under observation throughout her pregnancy. At various times albumin and casts appeared, eye symptoms, epigastric pain, general edema, unilateral headache and all the classical indications of eclampsia, but at no time over two of these appeared simultaneously, and at no time any rise of blood pressure over 130. She readily responded to restricted diet, and fluids. On each Sunday the bars were down but the six days were rigidly observed. Her delivery was uneventful and no toxic symptoms have appeared since return home. The daughter is a healthy specimen, now 3 months old.

CASE 3.—Mrs. N. C., Toledo, Ohio, was seen in consultation with Dr. Buford G. Hamilton, Feb. 10, 1918, para 1, aged 38, blood pressure on admission 138; headache, spots before the eyes: ratio of intake to output of fluids 1:63. Had shortness of breath, epigastric pain. Bag induction was done on fourth day after prophylaxis was begun. A living baby was born voluntarily after twelve hours' labor. No convulsions were experienced. On dismissal blood pressure was 124, ratio of output to intake less than 1, patient has since reported in good condition.

CASE 4.—Mrs. P., aged 23, para 1, the wife of a young railroad contractor, had been a patient from the beginning of her pregnancy. Several times she showed trace of albumin and on that account she was on a restricted diet throughout her pregnancy. Her blood pressure ranged between 110 and 120 mm. and she was always apparently in good condition with the exception of the albumin. The urine was examined and found negative on Friday, February 22, and her blood pressure which was taken measured 120. Saturday forenoon, the 23d, Mrs. P. called up and reported a headache for which phenacetin was ordered by telephone, and the patient requested to report her condition by evening. At 6:30 p. m. the telephone rang and report came that Mrs. P. had fainted while at dinner. On reaching the house in fifteen minutes, she was found on the floor of the dining room unconscious and limp. No history of any convulsive seizure could be elicited but the family was at once warned that she was in imminent danger of spasms and while a mouth gag was being improvised, from a clothes pin and a napkin, the first seizure occurred. The ambulance was ordered and responded immediately. Meantime the patient was gotten to bed and in twenty minutes had the second spasm. She was in the hospital in forty-five minutes and a rectal examination disclosed a long hard cervix; no sign of labor, blood pressure 200, patient still unconscious, an urgent cesarean section was decided on, and was done by Dr. B. L. Sulzbacher. The patient made a very gratifying recovery and the baby was at no time apparently disturbed by the precarious experience of his mother and both patients are now normal.

In this case the long hard cervix, the fact that three convulsions came out of a clear sky in less than an hour, and the almost complete suppression of urine, led to the conclusion that a section was the only

chance for a living baby, and gave the mother the greatest advantage, by early relieving her from the burden of oxygenating the fetus at a handicap, and also did away with the toxic foci which the placenta and the fetus doubtless constituted.

The welfare of the mother was a clear indication to the writer for a section, rather than to allow her to waste her life in an ineffectual attempt to relieve herself of the pathological burden of the toxemia and the physiological burden of the fetus which she has to attempt simultaneously.

CASE 5.—Mrs. J., para 1, pregnant five months, wife of a minister, referred by Dr. Clark of Wichita, was under observation for six weeks, and no abnormal indication. Blood pressure was normal, urinary findings negative and an ideal case it seemed, until one night a violent headache developed, and symptoms of eclampsia and abortion were apparent. Dr. Harry Jones was kind enough to see the patient, in Rosedale, as the writer was engaged in another case. She was given a hypodermic of morphin,  $\frac{1}{4}$  grain, and sent to the hospital. The following picture presented itself: Blood pressure 220, patient unable to see, pulse 110, urine loaded with albumin, both hyaline and granular casts, right unilateral frontal headache, epigastric pain, general edema, cough and vomiting.

Magnesium sulphate and veratrum were at once administered and the patient put into a hot pack. Blood pressure dropped to 160 and pulse to 60. After three days the patient was running a pulse of 90 and a blood pressure of 160 to 180. The indications were that the fetus was dead, since no fetal heart beat and no fetal movement was found after repeated examinations.

The Voorhees bag was placed as the best means of emptying the uterus, and labor followed in sixteen hours, a still-born female infant at the sixth month being delivered. No further convulsions were suffered and the patient went home on the eighteenth day apparently free from evidence of the toxemia. A recent report gives her condition as quite satisfactory.

CASE 6.—Mrs. S., aged 32, para 4, wife of a lawyer of Webb City, Mo., came Nov. 15, 1917, for her fourth confinement, as at each of the former, with a toxemia. Headache, visual disturbance, blood pressure 145 mm., urine showing albumin, hyaline and granular casts. Neuralgia of the face which was traced to a pyorrhea, resulting in infection and absorption which was relieved by extraction after a roentgenogram showed the point of necrosis.

As the pain and edema with insomnia persisted, the patient was sent to the hospital—McDonald 36, blood pressure 130. Induction was done at 9:30 p. m. and pains began at 10:20; to delivery room at 11, and labor terminated, patient back in her room at 12:15; two hours and three-quarters. Symptoms all cleared up and patient returned home in three weeks. Is now apparently well.

CASE 7.—Miss M., aged 16, para 1, was seen at St. Vincent's Hospital where she had been for six months. The last two months under the care of Dr. B. G. Hamilton. McDonald was 33, blood pressure 170, urine showed albumin, hyaline and granular casts. On account of her religious convictions, no active treatment was instituted. She was in labor forty-four hours with a R. O. P. and finally delivered with forceps, of a fetus weighing  $5\frac{3}{4}$  pounds. The patient was thoroughly exhausted. She left the hospital still showing hyaline and granular casts. Undoubtedly the bag induction would have spared her some of the long suffering.

CASE 8.—Mrs. B., para 1, aged 42, came into the hospital at the sixth month, having had false pains which were quieted by morphin. Her blood pressure was 120, urine findings negative. She left the hospital with friends and took an automobile ride in the afternoon. At 3 a. m. she went into convulsions, having three before entering the hospital, and two subsequently. With a long hard cervix and no soft-



ening, it was decided to do a cesarean section. The uterus was studded with small fibroids. The patient made a perfect recovery. After two weeks she had no symptoms. The baby lived six hours.

CASE 9.—Mrs. E., aged 30, para 2, entered St. Vincent's Hospital with a blood pressure of 240, which had continued for six weeks. Daily examination showed no trace of albumin nor casts. The day before delivery, which was normal, a trace of albumin appeared. Her treatment was magnesium sulphate and veratrum, which did not affect the height of the blood pressure. She was delivered of an 8 pound baby and left the hospital with normal blood pressure and no pathological urinary findings.

CASE 10.—Mrs. D., aged 22, para 1, came from Colorado, and entered the hospital April 8, 1918, under care of Dr. B. G. Hamilton. Her blood pressure was 200. She had marked disturbances of vision. Specimen of urine a week before had been negative, and blood pressure 124. She thought the visual disturbance due to the fact she had broken her glasses, and the edema due to pressure from the uterus. We found her McDonald 36, and her history showed her to be at term. She was given the usual prophylaxis, put into a hot pack, the pains began voluntarily and she delivered herself with no artificial assistance. The blood pressure fell to normal, and remains unchanged. Urine is negative but she still complains of some headache.

CASE 11.—Mrs. B., aged 26, para 2, was seen with Dr. Hamilton, March 25. One week before the doctor found albumin, but no casts in the urine, and a blood pressure of 120. On admission the blood pressure was 180, pulse 90, urine showed albumin, hyaline and granular casts and was scanty. She had right unilateral headache, red spots before the eyes, epigastric pain. Blood pressure rose to 190. An induction was done after prophylactic treatment failed to hold symptoms in check. After the bag was placed, the blood pressure dropped to 150. She was delivered in eight hours. Both mother and child left the hospital in good condition. On examination, the baby's urine showed albumin for three days, as it has, in many of these cases. No albumin in urine of mother or child on discharge.

CASE 12.—Mrs. A., aged 24, para 1, entered the General Hospital at the sixth month of pregnancy, passing one pint of urine in twenty-four hours, showing albumin, hyaline and granular casts. After diet and prophylactic treatment the patient went home, all symptoms having subsided; nor did she return. At term, she came into the hospital again and delivered herself voluntarily without symptoms of toxemia. This patient had previously undergone two surgical operations, an appendectomy and a fixation.

CASE 13.—Mrs. S. K., para 4, came into the maternity department of the General Hospital March 12, 1918, after having had twelve convulsions and being comatose, edematous, blood pressure 240. Hot pack, veratrum and magnesium sulphate were at once utilized, and symptoms subsided. The patient was discharged March 31, in good condition. Dr. Hamilton recognized the patient as having been seen twice in her home in eclampsia. All the babies were born alive.

CASE 14.—Mrs. G., para 1, aged 42, in eighth month was referred by Dr. E. H. Miller of Liberty. She was admitted at 4 a. m., coming by ambulance from her home. Patient was having convulsions in rapid succession, had general edema, which invading the glottis, gave her a breathing resembling a child with croup. Her blood pressure was 220, pulse 120, and temperature 101.8. Although the cervix was softened no effective labor was yet inaugurated, no fetal heart, nor fetal movements could be ascertained. The routine induction of labor by Voorhees bag was done after veratrum m. x., croton oil, m. ii. by catheter into the stomach and solution magnesium sulphate,

one ounce, by gavage also. Veratrum was repeated at 6 a. m., and blood pressure dropped to 160; at 7 it was 190; at 8 it was 180; 9:15 it was 195. Veratrum at 9:15 and blood pressure at 10 was 185. At 11 it was 200 and at 12 no change. At 1 after the hourly exhibition of veratrum it dropped to 140. Vision was dim although patient was now rational. Vomiting and convulsions were persistent. Proctoclysis of soda bicarbonate, 2 per cent., and glucose 5 per cent., was given. The twenty-four hour intake was 1,330 c.c. and output 550 c.c. At 6:45 a stillborn fetus was delivered; weight, 5 pounds 6 ounces; the placenta was delivered. Her blood pressure ranged from 160 to 220 after the delivery; intake and output would stand 1,700 c.c. to 1,640 c.c., whereas before delivery output was only one third of recorded intake. Sodium phenolphthalein test for efficiency gave a very slow response. On November 17 the patient was up in a wheel chair. She was very cheerful and invited the doctors and nurses over to Clay County for a chicken dinner at an early date. Her pulse was 88.68, and 76, blood pressure 180, intake 1,860, output 1,600 c.c., apparently convalescent and prepared to return home next day.

Without warning the blood pressure went to 200; kidney secretion was completely suppressed, the patient became comatose and expired evidently a case of eclampsia, grafted on a chronic nephritis.

CASE 15.—Mrs. P., para 1, entered hospital February 26, with a blood pressure 180, urine showing albumin, hyaline and granular casts. She was given magnesium sulphate, and a large quantity of fluids, was put in the pack and the blood pressure remained between 160 and 190 and albumin had constantly increased, vision was much impaired, vomiting and diarrhea persisted. She was prepared for a Voorhees bag induction, which was done on March 1. Labor set in in four hours, and patient was delivered in nineteen hours voluntarily. She left the hospital the third week; no symptoms showing, but slight albuminuria.

CASE 16.—Mrs. J. B., para 1, aged 25, admitted March 31, with blood pressure 200. No other symptoms. Went into labor voluntarily, was given veratrum m.x. and magnesium sulphate, 1 ounce. She delivered herself. After three hours, her blood pressure fell to 160; in five hours to 130. The urine on admission showed albumin 4+, diacetic acid and indican. Her recovery was uneventful. On dismissal blood pressure stood at 118 and pulse 90.

CASE 17.—Mrs. H. S., aged 26, para 1, was admitted Feb. 17, 1918, at 2 a. m., having been delivered at home by Dr. W. M. Sams, who was her attending physician and who was associated throughout the case. She developed convulsions three hours postpartum. Eight convulsions were suffered before she reached the hospital, unconscious, blood pressure 150, pulse 100, temperature 103. The patient improved under the routine treatment. Became conscious and was apparently convalescent when symptoms became worse; peritonitis developed and septic myocarditis. A severe ophthalmia had sprung up affecting the left eye and the pus being cultured gave a positive Neisserian reaction as did also the vaginal discharge.

Doubtless the septic myocarditis from which she finally succumbed could be traced to the Neisserian infection, proving as Dr. LaVake maintains that all eclampsias may be accounted for by some infection if we can but find the source.

CASE 17.—Mrs. H., para 1, a college woman, aged 34, McDonald 36½, Ahlfeld 27½, was seen in consultation with Dr. Buford G. Hamilton. She entered the hospital April 18, 1918, and although seen frequently at home with no evidence of toxemia but slight headache or some difficulty in sleeping, it was found on admission that marked symptoms of eclampsia were in evidence. Blood pressure was 200, pulse 62, unilateral headache, disturbed vision and

insomnia were marked. The blood pressure dropped to 160 and ranged back to 200. Intake 7,510 c.c., output 5,110 c.c. Patient became very restless, as well she might, carrying the burden of an eclampsia, a right occipito posterior position added to a mitral heart lesion. Labor was induced and the patient was having pains every two minutes lasting a minute. The bag was expelled and dilatation tolerably well established but rotation had not taken place when the patient had a terrific convulsion lasting two and a half minutes. She was at once put under ether anesthesia and delivered by Dr. Hamilton, by version. The baby was stillborn, evidently the result of the maternal toxemia and the convulsion. The mother is today apparently convalescent. No further symptoms have arisen and the blood pressure is 124 mm.

It would be a needless waste of your valuable time and simply a repetition to enumerate further the cases which go to make up this very remarkable list which now reaches the number of forty-four individual instances of pregnancy toxemia since May, 1917; twenty-three of them since Jan. 1, 1918.

One can hardly see how such an experience as this can be accounted for, except, as has been said, to ascribe the prevalence of these toxic explosions to climatic or atmospheric loss of equilibrium, as has been claimed by our friend, Dr. E. H. Miller of Liberty, former president of the Missouri State Medical Society, who some years ago read a paper before the state society on epidemic eclampsia and who recently told the writer as an evidence of epidemic herpes zoster, that he had in the past winter seen and treated nine cases of shingles in his own practice. Whatever opinion one may hold as to the etiology of these toxemias, one can but be struck by the fact that the results of a system of routine examination, laboratory reports, including urinalysis and the estimation of kidney insufficiency by the sodium phenolphthalein test which is now being done as a routine, the careful record of intake and output of fluids and blood pressure carefully watched, and treatment by veratrum, magnesia sulphate, hot packs and plenty of fluids has in comparison with other systems been unusually satisfactory. Furthermore, the Voorhees bag in the hands of the writer has demonstrated itself perhaps a hundred times in the last year, as the conservative and safe instrument for inducing labor with the least shock, greatest accuracy and generally safe results.

Still further, it is impressed on us that in spite of Stroganoff and the weighty endorsement of such eminent authorities as our friends, Drs. Barton Cooke Hirst and E. Gustav Zinke, these patients are not free from the menace to their lives until they are delivered and the source of the toxins removed.

The results here obtained could not have been had in the home of the patient, and it is emphasized most strikingly by these toxic cases as well as by the other obstetric emergencies, that the only ideal environment for their protection is that of the hospital.

To summarize: Toxemia of pregnancy and eclampsia are due to change of metabolism resulting from faulty proteid and fat, from an undetermined toxin from the growing ovum, resulting in infarcts and other pathological changes of kidney, liver, thyroid, brain and spleen. These toxins are thrown into the blood stream, the products of autolysis, of placenta infarcts, from which dying particles are carried to the kidney, liver, etc., and cause focal necrosis.

Hyperthyroidism is only an incidental evidence in the vicious circle.

The extra burden thrown on the mother to ward off this poison and to oxygenate the fetus, overwhelms her powers of resistance; especially may this result in alternating extreme cold weather and mild days—she being unable to stabilize her powers of resistance. A loss of equilibrium between centers and periphery of the body causes an acidosis, because of the unstable condition of the metabolism. Failure of elimination results in stasis, decreased maternal oxygenation; lung expansion, and heart action are disturbed; asphyxia results; foci of infection—teeth, tonsils, colon infections—may usually be demonstrated in toxemia. Adrenalin output is increased, blood pressure raised and blood coagulation abnormally increased in toxemia.

Consequently prophylaxis, including diet, bland foods and plenty of fluids, elimination by magnesium sulphate and sweats, eradication of the foci of infection, are to be planned. Asphyxia is avoided by deep breathing and fresh air. Acidosis is anticipated by alkalies. Blood pressure is reduced by veratrum, not by phlebotomy.

All other measures failing, the final resort is to empty the uterus. This should be under ether anesthesia, ether being the only safe inhalation anesthetic in these cases.

Technic which involves least shock:

1. Preliminary dilatation gradually by Hegar's dilators up to No. 20.

2. Voorhees bag No. 4, if at term—introduced by Reed's method—cigarette roll held by Paen's forceps. Gavage of soda bicarbonate, 2 per cent., after uterus is emptied. Cases of the fulminating type, long, hard cervix (in which no vaginal examination has been done) are best treated by classical cesarean section.

When after contamination by frequent digital examination infection is almost surely to be expected, a Porro or other hysterectomy should be done, in the interest of the mother. (See Franklin Newell's statistics of results near Boston, 100 per cent. mortality.)

A woman without a uterus is better than an anatomical specimen.

The results in the series of cases from which these conclusions are drawn showing 95 per cent. recoveries of mothers, 5 per cent. mor-



tality and 85 per cent. of the children at term, our mortality of 15 per cent. at least warrants the belief that since Tweedy's tables showed maternal mortality of 8.1, DeLee 20, Williams 25, Crogin 28, N. Y. Lying-In 30, the average American 38, the Royal Maternity of Edinburgh 66 (these figures being from DeLee's Year book, 1918), that our results are far above the average, or else our cases have been less toxic than those encountered elsewhere, which is not likely to have been the case.

From our own experience and from that of other observers, including a most interesting report just received from Dr. Ben Myers, who does a large obstetric work in Alaska, and who finds that in the last year, an unusually cold, wet season, 12 per cent. of his cases suffered from toxemia, the conclusion is drawn that the weather does at least aggravate the tendency to this condition. As there is such a close relation between the toxemias and the nervous system, is it not also fair to ascribe to the war an incidental effect as a causative factor?

The moral to be drawn is that pregnancy is a condition in which the patient is peculiarly susceptible to external influences of cold and damp, and more especially during the war, owing to psychical impressions disturbing the nervous equilibrium, she should be inspired by a cheerful optimism that we are going to win the war and make the world safe for future generations of freeborn people.

Bryant Building.

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#### SPASMOPHILIA AND INFANTILE CONVULSIONS\*

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It is well understood that convulsions during the first few days of life are of quite different significance from those after the third month. These convulsions in the new-born, due almost always to birth injuries, usually meningeal hemorrhage, are not considered here. For years it has been taught that the ease and frequency with which an infant could be thrown into a convulsion depended on the instability of the nervous system at this time of life; and that convulsions were rare under three months of age owing to the fact that the pyramidal tracts at this time of life were not myelinated; therefore, not capable of readily transmitting impulses from the cortical centers to the spinal cells. The regular presence of a Babinski in early life supported the belief that the pyramidal tracts had not fully developed.

Infants showing a strong tendency to develop convulsions, one convulsion being very

liable to be followed by another, have been found to have at the root of the trouble a complex metabolic disturbance known as the spasmophilic diathesis. This is defined by Thiemich of Breslau as a constitutional anomaly which is recognized by a measurable mechanical and electrical overexcitability of the nervous system and which produces a pathologic predisposition to certain partial and general clonic and tonic convulsions.

The average practitioner if asked what is his experience in regard to the cause of convulsions in children would doubtless reply that the majority owed their origin to some gastrointestinal irritation, some indigestible article of diet. The grandmother would give it as her opinion that the teeth were at the bottom of the trouble. Men treating children meet with convulsions preceding and accompanying a wide variety of conditions. Fever from the slightest cause, such as an attack of varicella, aphthous stomatitis, grip, I have seen accompanied by a convulsion. Then again I have seen babies in apparently perfect health, on a milk formula apparently flawless, with no fever, and still they would develop convulsions.

The knowledge that something constitutional is at the bottom of the trouble helps us greatly in combating this trouble. At St. Ann's Infant Asylum we have met with a number of infants who developed convulsions with absolutely no pathologic findings except this diathesis. We are so familiar with the condition that it causes us absolutely no wonderment. Our results in handling these cases have been excellent.

Having met with an infant with convulsions how are we to proceed in recognizing the true condition? During the first three months of life this diathesis has not had time to develop and this condition has hardly to be considered; some organic lesion will explain the convulsion. After three months of life we will strongly suspect spasmophilia, remembering that the exciting cause, be it intestinal toxins or systemic intoxications, are not liable to bring out a convulsion unless the reflex centers in the spinal cord and the sensory and peripheral nerves are hyperexcitable.

By means of electrical reactions we can pick out these babies with this convulsive tendency even when they appear in perfect health. Innumerable normal infants have been tested out and when the cathodal opening contraction takes place with a current less than 5 milliamperes we can pronounce latent spasmophilia present. It might be added that the nerves of the newly born and of young children require more current to bring out a contraction than in later life, and that at about the fifth year there is very little difference. The cathodal closing contraction takes place in healthy children with a current less than 5 milliamperes. A contraction obtained with the positive pole on opening the

\* Read at the meeting of the St. Louis Medical Society, Oct. 19, 1918.

current, if less than 5 milliamperes, is strongly indicative of spasmodophilia, but for practical purposes we have found it sufficient to be guided by the results obtained with the negative pole. A normal infant will never show a contraction with a current less than 5 milliamperes on opening the cathode. In making this electrical reaction, a large indifferent electrode is placed on the infant's abdomen and the small stimulating one over the median nerve at the bend of the elbow. Both electrodes being in place, the negative being the stimulating one, the current of the galvanic battery is slowly turned on by means of the rheostat; no contraction takes place as this requires the making or breaking of the current. When the milliamperemeter registers five the current is broken when, if the infant is normal, no contraction takes place. This exceedingly simple operation gives us most valuable information for the future welfare of the infant.

Breast fed babies escape almost completely from this diathesis which affects a large percentage—from 30 to 50—of the artificially fed. The condition is a metabolic disturbance associated with a faulty balance of the calcium salts. Heredity plays an important rôle in the etiology and more cases are met with in the spring of the year. The fat and protein of cow's milk are believed not to favor the development of the condition, the odium being placed on the whey. The observations of Finkelstein and his pupils prove this.

Tetany and laringismus stridulus may show themselves in a child in place of general convulsions and are simply different manifestations of one and the same condition. The pathognomonic signs, the Trousseau and the Chvostek, are usually readily elicited. Rickets, which has been known so long to be closely associated with laryngismus stridulus and general convulsions, is found in a large number of these children because they are artificially fed and artificial feeding and rickets are bed-fellows. Furthermore, in both conditions there is this perverted calcium metabolism; for some strange reason the body juices of these infants can not hold on to calcium, and more of it leaves the body than can be absorbed. The blood of these infants shows, on examination, a deficiency in this important element.

#### TREATMENT

The treatment is most satisfactory. The convulsions having subsided as the result of antispasmodics, chloral, bromides, or even morphin, hypodermatically, we proceed so to alter this diathesis that the electrical reactions will be improved and a convulsion will not be so easily brought out. Cow's milk is to be absolutely eliminated from the diet as it is the injurious agent, and in its stead cereals are administered. The length of time cow's milk is to be excluded

will depend on the individual case. Two weeks is the longest time it is safe to depend on a vegetable protein; cow's milk then, in small doses, must be started. The ideal way to cure the constitutional anomaly is by the administration of breast milk. In case the cautious administration of cow's milk is followed by a relapse, breast milk is indispensable. Infants past eight or nine months get along very well on vegetables and cereals and the feeding problem will be comparatively simple, but in younger infants, especially when the weight is subnormal, to succeed without breast milk is extremely difficult. After the storm has somewhat abated exclusive diet of breast milk is not necessary and cow's milk can be cautiously added to the diet. Castor oil should be given at the outset, as free purgation alone diminishes the hyperexcitability; this is to be followed by water, oatmeal water, phosphorus and codliver oil 1 part to 10,000, as recommended by Kassowitz years ago.

A few case reports will illustrate what has been said above:

Baby D., aged 10 months, fed exclusively on the breast since birth, supply of milk failing mother consulted me in regard to feeding. The infant absolutely refused all artificial feeding and it was found necessary to resort to gavage three times a day for four days before the infant would take a cow's milk mixture. After twelve weeks of cow's milk diet with cereals the infant developed convulsions which the mother thought due to the teeth. Convulsions continued twenty-four hours before medical advice was sought. Chloral by rectum and bromides by mouth brought them to an end. The electrical reaction showed the cathodal opening contraction took place with a current of 3 milliamperes. Child was given phosphorus and codliver oil, and cow's milk was kept out of the diet for two weeks, nothing being fed but cereals and well cooked vegetables that had been strained. Cow's milk was cautiously added to the diet and infant made a complete recovery.

Baby E. took convulsions at eight months of age which were repeated and very violent. Chloral by rectum in one-half gram doses, bromides and urethane by mouth, ether inhalations, magnesium sulphate subcutaneously, lumbar puncture, all failed to permanently stop the convulsions. Morphin hypodermically, one-twentieth grain every three hours for four doses, put an end to the spasms. This infant had a severe diarrhea the preceding summer which had reduced it to atrophy; breast milk had again established its nutrition, and at the time of the convulsions had been on cow's milk two months. The Chvostek and characteristic electrical reaction were both present. The cow's milk was entirely eliminated from the diet and infant placed on breast milk fed through a bottle with starches in conjunction with codliver oil and phosphorus. Recovery was prompt and uninterrupted. After one month cow's milk was cautiously added to the diet, but the amount in twenty-four hours was not allowed to exceed 16 ounces. There was no return of the spasms.

H. B., 20 months old, when first seen was highly nervous and on the verge of a convulsion, temperature 102 degrees, physical examination negative, except a slight redness of the throat. Other members of the family were suffering from the grippe. Mother stated child had had three attacks of convulsions



during the past three months and feared that, perhaps, there might be danger of epilepsy. The family was from the South and a former physician blamed malaria and another the teeth. A searching physical examination one week later after the acute symptoms had subsided was negative, except a Chvostek and an anodal opening contraction with 3 milliamperes and a cathodal opening contraction with  $4\frac{1}{2}$  milliamperes. Undoubtedly the gripe had aroused to activity the latent spasmophilia. Usual treatment was ordered and child has had no more spasms.

The above cited cases will illustrate a large group met with by the writer during the past several years.

#### SUMMARY

A large number of infants and young children suffer from latent spasmophilia which is at the bottom of the large majority of convulsions occurring in children. For this to become active an exciting cause is frequently present, but is not absolutely necessary. Children fed on cow's milk are specially liable, babies on the breast show a relative immunity. Mother's milk is not only the best prophylactic, but also is a wonderful curative agent. Not only convulsions, but all the other manifestations of spasmophilia, tetany with its carpopedal spasm, laryngospasm and spasmodic apnea, respond similarly. The cathodal opening contraction with a current less than 5 milliamperes is pathognomonic; the anodal opening contraction with a current less than 5 milliamperes is very suspicious.

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#### THE VALUE OF THE NEW EAR TESTS IN DETERMINING THE CAUSE OF VERTIGO\*

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Equilibration in general depends on impulses from three sources, the kinetic-static sense, the sight and muscular sense. Until recently man has been credited with only five special senses, sight, hearing, taste, smell and touch; but we have discovered two more, muscle and kinetic-static sense. Any special sense depends on an end organ for the reception of stimuli, nerves to convey these stimuli and a nerve center to interpret their significance. The kinetic-static sense fulfils these requirements and has for its sole function the maintenance of balance.

Perfect equilibration is accomplished through an harmonious cooperation of sight, muscle-sense and, most particularly, the kinetic-static sense. After impairment or loss of one of these

senses compensation may take place to a certain extent. Perversion of any one of them may be much more disturbing than its loss. We are frequently called on to see a patient who complains of dizzy spells and unfortunately in the past we were at a loss as to the cause and could offer but little in the way of help. We have been accustomed to regard vertigo as something vague and mysterious and beyond the reach of medical aid.

In the light of the new ear test vertigo should be regarded as a distinct clinical entity, deserving just as careful investigation and analysis as fever or any other distressing symptom. By vertigo is meant a subjective sensation of a disturbed relationship of one's own body to surrounding objects in space. It is not some general manifestation accompanying disorders of this, that or the other organ, but it is a disturbance perceived within a definite part of the brain. Therefore, one should never speak of gastric, kidney, cardiovascular, idiopathic, or any general vertigo, which in its ultimate analysis means nothing. The stomach of itself, or the kidney, or heart, can no more produce vertigo than they can produce sensation of flashes of light, hallucinations of sound, or obsessions of smell. All conscious sensations are cerebral. Headache, be it due to constipation, displacement of pelvic organs, gastro-intestinal disturbance, or any reflex cause, is, nevertheless, in the head. In just the same way, if a disturbance in any organ of the body is accompanied by vertigo, it is due to a direct attack on the apparatus capable of producing vertigo, namely, the internal ear or its intracranial distribution or pathways.

I do not mean to say that vertigo can be produced only when we have a pathologic condition of the inner ear, for it is well known that various visual disturbances, cardiovascular affections, etc., also manifest vertigo as a symptom. All these are contributing causes of vertigo. If the cause fails to irritate the ear or its nerve distribution there will be no vertigo.

The internal ears and the intracranial pathways constitute the apparatus that keeps us from being dizzy and that part of the inner ear known as the semicircular canals presides over our equilibrium. In the presence of some pathologic condition in the labyrinth or along any of its paths it fails to perform its function. Viewed in this light, many conditions in the category of the physician's daily experience with these cases, attain a new significance.

Just as we examine the heart and blood pressure to determine the condition of the cardiovascular system, or as we test the urine in suspected cases of nephritis, or as we have a Wassermann test made in suspected syphilis, just so the ear test enables us to analyze the appar-

\* Read before the Kansas City Eye, Ear, Nose and Throat Club, Jan. 16, 1919.

atus responsible for dizziness. Instead of guessing we can know the reason for vertigo.

We will attempt to classify all possible causes of vertigo and then relate some cases of the various types, showing how the ear tests have demonstrated the reason for the vertigo:

1. Involvement of the ear mechanism by a lesion in the ear itself.

2. Involvement of the ear mechanism by a lesion affecting the intracranial pathway from the ear.

3. Involvement of the ear mechanism by ocular disturbance either through the eye muscle nuclei or through association of fibers from the cuneus to the first temporal convolution.

4. Involvement of the ear mechanism by cardiovascular disturbance.

5. Involvement of the ear mechanism by toxemia from any organ or part of the body.

6. Involvement of the ear mechanism from reflex irritation.

In the external ear we frequently find impacted cerumen, foreign bodies, eczema of the auditory canal, and furunculosis. All of these conditions are obviously purely local and require local treatment.

Dr. R., a physician, came to me complaining of dizziness coming on suddenly. After giving him the Barany test, found no trouble with his labyrinth; he had, however, impacted cerumen in both ears. After removing it the dizziness disappeared. This was induced chiefly by the transmission of impulses through the conducting apparatus caused by the pressure of the cerumen on the drum membrane.

In the middle ear and eustachian tube we encounter catarrhal changes producing deafness and various inflammatory conditions and occasionally vertigo. After the proper treatment the dizziness will disappear. To be sure some of the inflammatory conditions of the middle ear have more than a local significance as abscess of the middle ear and mastoiditis may have far-reaching complications; this is, after all, merely the local source of infection. A lesion of the vestibular portion of the labyrinth produces dizziness, staggering, nausea, vomiting, and perhaps diarrhea, just as an affection of the cochlea produces noises in the head.

The external ear, the middle ear and the cochlea are of interest from a local standpoint, whereas the equilibratory portion of the ear is part and parcel and servant of the whole organism. A big, strong man may become unable to stand or even sit up because of a slight congestion of the internal ear; perhaps the pathologic process has produced a lesion no larger than the head of a pin, yet he will be entirely incapacitated. The etiology in these cases may

be overlooked unless we come to recognize the need of an ear examination.

Noninflammatory conditions of the inner ear may be produced by various toxemias, or by hyperemia or by anemia of the labyrinth; these affections are productive of many annoying symptoms, deafness, tinnitus, vertigo and staggering; all bad enough in their way and also disabling. In many inflammatory conditions of the internal ear, immediate expert attention is imperative and the patient's condition should be considered grave.

#### SUMMARY

Acute and chronic inflammatory conditions of the middle ear may produce only irritative effects on the labyrinth, so that the patient suffers from more or less vertigo only so long as the acute stage of congestion lasts; the vertigo vanishes with the disappearance of the inflammation. Slow degenerative changes within the labyrinth similarly produce attacks of vertigo from time to time.

On the other hand, sudden destruction of the whole, or part, of one labyrinth is accompanied by profound vertigo, nausea, vomiting and loss of equilibration. Such destruction of the whole or part of the labyrinth may be produced by trauma, but usually by hemorrhage or serous effusion into it, and may occur in diabetes or any condition in which the vascular system is affected. The hearing is usually markedly affected, if not altogether gone and the condition is characterized by an attack of sudden onset, the violence of the symptoms quickly reaching a climax, which gradually subsides, all of the symptoms disappearing when the brain centers have learned to compensate. According to Jones, these are the symptoms of Meniere's disease complex. Ballenger, however, claims that in Meniere's symptoms complex, there is a history of previous deafness and ear disease, it does not occur suddenly nor is it profound. Inflation of the middle ear gives immediate and complete relief. It is due to eustachian catarrh, complicating a similar process in the epipharynx, or to a chronic adhesive process. The rarefaction of the air in the tympanic cavity retracts the membrana tympani and forces the foot plate of the stapes into the oval window, there increasing the tension of the labyrinthine fluid and giving the symptoms of Meniere's disease. According to Politzes, a great majority of the cases are due to a temporary congestion or exudation into the labyrinth, arising in the course of middle ear infection which brings about an irritation of the vestibular and ampullar nerves. Jones reports some cases due to inflammatory conditions.

George W., aged 30, was suddenly seized with dizziness, severe enough to make him fall over. He had headache, vomiting, and diar-



rhea and had to be put to bed. His physician thought he had stomach trouble and treated him accordingly, later attributed it to his eyes and an oculist undertook to treat the case, but instead of his eyes causing the trouble, he found it was due to chronic otitis media, which disclosed a circumscribed labyrinthitis, a beginning extension into the internal ear of the purulent process in the middle ear. After local treatment the patient recovered.

In another case, patient had attacks of vertigo for fifteen years, off and on; examination showed entirely normal internal ears and all intracranial pathways from the ears. The left ear had been the seat of occasional discharge. Under local treatment he made a good recovery. It is a matter of common experience that in a certain number of cases of chronic purulent otitis media there is an extension of the process into the labyrinth, which is made evident by the appearance of a nystagmus when pressure is applied to the external auditory meatus. When a nystagmus appears on pressure, the fistula test is considered positive and usually indicates a fistulous opening into the labyrinth at some point. When a patient complains of dizziness and staggering with or without vomiting and nausea, the first thought, therefore, should be of a possible lesion of the ear itself.

Lesion within the brain affecting the intracranial pathways from the ear, such as tumors, hemorrhages, thrombosis, infarct, abscess, gumma, tubercle, meningitis, etc., are often found. In making diagnoses in these cases, we should always use Barany's test, of which I shall have something to say later on.

For example, Mrs. G., aged 44, suddenly began to have difficulty in walking and later severe attacks of vertigo and vomiting. A diagnosis of brain tumor was made and located in the right cerebellar hemisphere, and confirmed by a roentgen-ray report which stated that it was a cyst. The surgeon was about to operate, but hesitated because the ear examination suggested that the lesion was in the right labyrinth and the cerebellum appeared normal, both arms pastpointed properly, both to the right and to the left. The patient had an uninterrupted recovery without an operation, has given birth to a child and remained in perfect health ever since.

If the ear tests fail to show any impairment of the ears or their intracranial pathways, an eye examination is indicated. Many cases of vertigo are cured by correction of ocular defects. The eye, however, is only a contributing cause of vertigo in certain cases; it is not the organ of balance. If an eye is removed, blindness results but no vertigo. It is only when an ocular defect, as in muscle paresis or imbalance, affects the ear mechanism that vertigo results.

Cardiovascular disturbance includes all conditions which produce either congestion or eschaemia, within the cranium. As in shock, there occurs a cerebral ischaemia, the temporarily poor blood supply to the psychic centers causes faintness; similarly, the poor blood supply to the ear mechanism (either peripheral or central) produces vertigo.

Toxemias affecting the ear mechanism include ptomain poisoning, alcoholism, poisoning by chemicals such as lead, quinin, salicylates, nephritis, gout, rheumatism, syphilis and the toxemia of infectious fevers, such as mumps, scarlatina, typhoid, etc. Toxemias may be divided into two classes: (1) Those producing no degeneration of the cellular elements within the internal ear or its intracellular pathways; (2) those which have produced a definite impairment in some portion of the ear or pathways.

The first constitutes a very large proportion of the cases of vertigo that are seen by the physician. The simplest illustration of this kind of vertigo is the dizziness produced by the ingestion of alcohol.

Mrs. G., aged 30, awoke one morning with a violent attack of vertigo and retching. The attack suggested ptomain poisoning except there was no pain in the abdomen. These symptoms lasted for nearly two days and then gradually improved and on the sixth day was apparently well, but a day or so later, on bending over to kiss her boy, she suddenly felt like she was plunging forward through a door. This lasted for a day, gradually improving, but for a year afterward she complained of vertigo only when she lay down at night, a sensation as if the bed were falling over. This would last a few minutes and then pass away.

Examination of ears showed normal cochlea, normal semicircular canals, and normal pathways from the ear throughout the brain. This showed we were dealing with a purely functional neurosis, or a toxic irritation of the internal ears. It was found that the source of the toxemia was a pyuria due to a pyelitis and an associated cystitis. After vigorous use of urotropin the pyuria and vertigo practically disappeared.

Toxemias which produce a definite impairment of the internal ears include the powerful toxins such as in mumps or syphilis; also the repeated assaults of milder toxins such as those from the gastro-intestinal tract and other focal infections located in the teeth, tonsils and upper respiratory tract.

Mrs. H., aged 50, had irregular attacks of vertigo. In October, 1915, she had a severe attack while sitting in the theater and she was taken to her home. After that she was dizzy most of the time; it made no difference whether she was lying down or standing. When going

up and down on elevators she would almost faint. She had an eruption just under the skin that came on about the time she first became dizzy. There was no evidence of any intracranial involvement along any of the pathways from the ear. There was a slight impairment of nystagmus vertigo and pastpointing, indicating impairment of function of the vestibular portion of the right labyrinth due to a toxemia. It was found that she had very bad tonsils which were removed and the vertigo completely disappeared.

Another case is reported. A patient had a severe attack of rheumatism and three months later had a severe attack of vertigo and staggering. Ear examination showed a distinct impairment of both internal ears, in both the cochlea and vestibular portions, due to toxemia which caused a toxic labyrinthitis. Roentgen ray showed abscesses at the roots of two teeth. These abscesses were drained by removing the teeth. Within a week the vertigo and rheumatism disappeared.

The value of the information gathered from the study of the eye and nerve pathways from the eye is universally conceded, but it is only in the past few years that similar possibilities in ear study have come to light although it is not yet generally recognized. When stimulation of the ear produces the expected normal phenomena, it demonstrates that these particular pathways are intact. Conversely an absence of normal responses indicates an impairment by disease of the ends or lines of these pathways.

The ear test consists of stimulating the semicircular canals; this is done by revolving a person in a turning chair or by douching the ear with cold or hot water or by applying the galvanic current to the ear or by compression and aspiration for the fistula test. The revolving method is the one most used and usually suffices for determining the integrity of the semicircular canals.

The main advantage of the caloric test is that it enables us to examine each internal ear separately and also to analyze the function of its canals separately, whereas turning stimulates both labyrinths at the same time. Cold water at 68 F. is better than hot water at 112 F. and much more comfortable.

Such ear stimulations produce certain definite phenomena. The two distinct phenomena are nystagmus and vertigo. Because of this vertigo the patient falls in a definite direction and also when his eyes are closed, he attempts to find with his finger or his foot an object he has previously touched, he is unable to find it but "past-points" to the right or left above or below, depending on the direction of the vertigo. These various phenomena are invariably

present in normal persons and always follow definite laws. For example, turning the patient to the right with the head in the upright position stimulates both horizontal semicircular canals and produces a horizontal nystagmus to left (it would really be to right if we named it from the slow vestibular movement, but it is named from the quick cortical movement), falling and pastpointing to the right. Douching the right ear with cold water, head upright, stimulating the vertical canals, produces a rotary nystagmus to the left, pastpointing and falling to right. Hot water produces the opposite phenomena.

This, then, in brief, is the method of testing this vestibular apparatus. In any given case of vertigo the first thing to be done is to examine this ear mechanism that is responsible for the vertigo. The ear test will always show either abnormal or normal responses; if abnormal the tests will help to determine a lesion either within the ear or within the brain. If the responses are normal we have then narrowed the diagnosis down to, (1) a purely functional neurosis, and (2) an ocular disturbance or to an evanescent toxemia, the source of which must then be looked for. The ear examination to be sure, does not determine everything that has to do with vertigo, but it certainly brings order out of chaos in these cases and makes possible accurate diagnosis and intelligent treatment.

When the responses obtained on stimulation are not normal, the case should be considered as having an organic lesion and they need not include all the responses. An impairment of even one response shows that we are probably dealing with an organic lesion. If organic, our next step is to determine whether the case is one of peripheral or central lesion. This is sometimes very difficult to determine. I will emphasize a few of the most important principles in this differential diagnosis:

In a peripheral lesion all the responses are impaired and conversely the presence of any one normal response to stimulation suggests a normal labyrinth and eighth nerve. A spontaneous nystagmus in the vertical plane either upward or downward indicates a central lesion. If stimulation produces a perverted nystagmus, then again the lesion is probably central. If central, our next problem is to locate the lesion more definitely within the cranium. The simplest way is by elimination. We begin with the labyrinth and proceed brainward, considering each structure by itself. The peripheral lesions include those of the labyrinth and eighth nerve, while the central lesions include the remainder of the cases.



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### Missouri State Medical Association

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In this amended form, the senate committee has reported the bill favorably.

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at the time of death shall neglect or refuse to make out and deliver and file with the local registrar, within twenty-four hours after the death of said person, the certificate therein provided for, he shall be fined not less than \$5 nor more than \$50.

It is very evident that the provisions of this bill could not possibly be met by physicians in very many instances, and that in all instances the interests of many very sick people would be seriously endangered if physicians were compelled to abandon them while attempting to comply with the provisions of this bill. The present statute requires undertakers to obtain the necessary data called for on the death certificate and then have the physician fill in the cause of death and sign the certificate. There is no good reason for altering the present law on this subject and therefore our members should write their senators and representatives requesting them to oppose the passage of the bill. The bill has been engrossed in the senate and members should not delay in petitioning their senators to vote against it. The same bill is in the house as House Bill 306 and is in the committee on public health. The three physicians who are members of the house of representatives are opposing the passage of this bill and they should have the support of members of our association. These physicians are Drs. A. J. Speer of Bollinger County, W. A. Porter of Lafayette County and C. H. Jones of Wayne County. Members of the house committee on public health are I. P. Langley of Lebanon, chairman, A. J. Speer of Bollinger, W. A. Porter of Lafayette, G. W. Babcock of Butler, S. F. Harwood of Ozark, J. S. McMillan of Greene County, E. J. Davidson of St. Louis City, C. H. Jones of Wayne County, N. B. Watts of Madison County, J. H. Taylor of Jackson County and W. A. Stephens of Johnson County. Letters should be sent to these gentlemen setting forth the reasons why physicians could not comply with this measure and asking them to vote that it do not pass.

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There can be no valid argument against writing prescriptions in characters of unmistakable legibility. The few instances where it is desired that knowledge of the ingredients of the prescription should be withheld from the patient, can be readily met by having the prescription sent to the druggist in code words or by any other means that could be readily devised by the prescribing physicians.

Perhaps many of these accidents could be avoided if pharmacists and physicians would compile a list of those drugs which should not be abbreviated and preserve these lists for ready reference at all times. The druggist is often compelled to telephone the physician when in doubt concerning the ingredients of the prescription, which entails much loss of time and could be avoided if prescriptions were written in legible characters; but the abbreviation of poisonous drugs which are readily confused with harmless ones ought to be discontinued.

#### CONFERENCE ON REHABILITATION OF THE DISABLED

A conference on the rehabilitation of the disabled will be held in New York City from March 18 to 22, inclusive. This conference, which will be international in its representation and the scope of subjects to be discussed, should have a special interest for the members of the medical profession, and for all those who play a part in the restoration of the disabled to the best possible physical condition.

The experience of America and that of the allied governments in occupational therapy, functional restoration, the fitting of artificial limbs, compensation, vocational reeducation, and kindred subjects, will be reported on by experts in those fields.

The conference will be held under the auspices of the Red Cross Institute for Crippled and Disabled Men, and that part of the program related to the work for blinded soldiers will be directed by the Red Cross Institute for the Blind. Two of the evening meetings will be held in Carnegie Hall and will be open to the public.

Representatives of practically all the governmental agencies in the allied countries dealing with disabled soldiers will attend, acceptances having already been received. Among the authorities to be represented are the British Ministry of Pensions, the French National Institute for War Cripples, the Belgian Military Institute for Crippled Soldiers, the Italian Ministry of Pensions, the Canadian Invalided Soldiers Commission, the Australian Department of Repatriation, and the Bureau of Reeducation and Reconstruction of the American Red Cross in Paris, in addition to other individual organizations in the respective countries.

Among the authorities in the United States which have promised representation are the Federal Board for Vocational Education, which is providing for American disabled soldiers training for self-support; the Division of Physical Reconstruction of the Office of the Surgeon-General of the Army, which is providing restorative treatment and education during the convalescent period; the Bureau of War Risk Insurance, which furnishes artificial limbs to amputated soldiers of the American Expeditionary Force and pays disability compensation, and the American Red Cross Department of Civilian Relief, which through its home service section, provides social after-care for disabled men.

Among the American authorities who will speak at the various sessions are: Col. Frank Billings, chief of the division of physical reconstruction of the Office of the Surgeon-General of the Army; Lieut.-Col. James Bordley, in charge of work for blinded American soldiers and sailors; Lieut.-Col. Harry E. Mock, in charge of convalescent centers for the Surgeon-General; Dr. Charles A. Prosser, director of the Federal Board for Vocational Education; Dr. J. A. C. Chandler, chief of the rehabilitation department of the same board; Mr. T. B. Kidner, formerly vocational secretary of the Canadian Invalided Soldiers' Commission and now attached to the staff of the federal board; Mr. Curtis E. Lakeman, director of the division of after-care of the Department of Civilian Relief of the American Red Cross; Lieut.-Col. Charles E. Banks, chief medical adviser of the Bureau of War Risk Insurance, and Dr. R. M. Little, of the American Museum of Safety.

#### OBITUARY

##### AUGUST G. MEYER, M.D.

At the monthly meeting of the Ste. Genevieve County Medical Society the following resolutions were adopted:

WHEREAS, It has pleased the Almighty to remove from our presence our most revered and respected co-worker, Dr. August G. Meyer; therefore be it

*Resolved*, That we deeply deplore the death of our beloved brother; and be it further

*Resolved*, That in his death the medical profession has lost one of its most loyal and respected members, one of the oldest members of our county society and a highly respected citizen, and that in token of our esteem for our fellow member, these resolutions be incorporated in the minutes of our society and sent to the local papers, also to THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION and a copy be sent to the wife of Dr. August G. Meyer.

DR. G. M. RUTLEDGE,

DR. R. W. LANNING,

*Committee.*

## HENRY S. ATKINS, M.D.

Dr. Henry S. Atkins of St. Louis, a graduate of the Beaumont Hospital Medical College, now the Medical School of the St. Louis University, in 1887, died in a hospital in St. Louis, Dec. 25, 1918, after an illness of several weeks followed by several operations, aged 51 years. Dr. Atkins was a very successful practitioner and devoted himself entirely to mental and nervous diseases for a number of years before his death. He was well qualified in this branch, having been superintendent of the St. Louis City Sanitarium for a number of years, after which he established the Glenwood Sanatorium, near Kirkwood, for the treatment of nervous and mental diseases. He was a member of the St. Louis Medical Society, the Missouri State Medical Association and a Fellow of the American Medico-Psychological Association.

## JAMES M. SCOTT, M.D.

Dr. James M. Scott of St. Louis, one of the oldest graduates of the St. Louis Medical College, now the Medical School of Washington University, died at his home, Dec. 22, 1918, from pneumonia, aged 83 years. Dr. Scott graduated in 1853 and practiced in St. Louis during all his long career in professional and civic life, and so endeared himself to everyone that knew him that he was universally loved and revered. He was a teacher of medicine practically from the time of his graduation until he retired. He was one of the representative physicians in St. Louis who established the St. Louis College of Physicians and Surgeons in 1869, but later he became attached to the teaching faculty of his alma mater and continued in that association during his active career. Always an ardent supporter of the high ethical ideals of the profession he was honored by his confrères, respected and loved by patients and physicians alike.

He was a member of the St. Louis Medical Society, which he served as president in 1877 and had been elected an honor member in that body for a number of years before his death. He was a member of the St. Louis Board of Health for two terms and held other positions of honor and distinction during his long service in the profession.

## JOHN C. MATTHEWS, M.D.

The following resolutions were adopted by the Greene County Medical Society in memory of the death of John C. Matthews:

Dr. John C. Matthews was born in Greene County near Springfield, Mo., in 1865, and died at his residence in that city, Dec. 7, 1918, at the age of fifty-three years.

Dr. Matthews was raised and educated in Greene County and in the City of Springfield. He graduated in medicine at the Missouri Medical College in 1890, located in this city and practiced general medicine continuously until the date of his death. He died in the harness, having made a call to see the sick just one hour before his death. Dr. Matthews was an active worker in everything that pertained to medicine. He gave special attention to general public health matters. He was, at the time of his death, second vice president of the Missouri State Medical Association and president of the Greene County Medical Society. He was a loyal and ethical physician. His patients loved him and his colleagues respected him. The community and the medical society suffer a great loss in his untimely death.

When the call came from the Surgeon-General's Office for doctors to go to the front, Dr. Matthews was one of the first to make application for a commission in the Medical Reserve Corps. He was rejected on account of physical disability.

He was married in 1891, his wife and only child, Miss Mary Matthews, survive him.

WHEREAS, In the death of our lamented president, Dr. John C. Matthews, the Greene County Medical Society has sustained a great loss; therefore, be it

*Resolved*, That the members present stand for thirty seconds in commemoration of his death, and the society extends to his bereaved family its sincere sympathy.

DR. F. B. FUSON,  
DR. R. L. PIPKIN,  
DR. LEE COX,  
*Committee.*

## JNO. E. ALLDER, M.D.

Dr. Jno. E. Alder of Cane Hill dropped dead in his yard Sept. 26, 1918, from heart rupture.

He was born Jan. 13, 1843, in Kentucky. When a youth of 18 he moved with his family to Missouri, making the journey in ox wagons. He served three years in the Union Army in our late war. He leaves a wife and four children: Mrs. Chas. F. Landers, Dadeville, Mo.; Miss Etta M. Alder, Cane Hill; Lieut. E. A. Alder, M.R.C., Fort Riley, Kan., and Dr. B. B. Alder, Cane Hill, Mo.; six grandchildren and four sisters.

He graduated in 1877 from the Louisville College of Physicians and Surgeons, Louisville, Ky., and began the practice of medicine at Cane Hill, where he remained a most conscientious and faithful practitioner until the day of his death.

Dr. Alder began the practice of medicine at a time when the family doctor was held in the highest esteem and respect—in a day when the family doctor was the counselor and advisor in all matters, whether it be topics of farming, horse trading, religion, law, marriage or what not. He was supposed to be posted and capable to advise on any matter that arose in the family, not only on any and all phases of medicine from the most complicated obstetrical or surgical case, to cases which would now be referred to the specialist; and the conscientious and faithful devotion to duty exemplified by



Dr. Alder showed the confidence and trust of the community was not misplaced. The night was never too dark, the weather too cold, the sun too hot or the patient too poor for him to respond to the call of the sick.

He was a man of keen intellect and strong convictions, and with great vehemence rejected the Darwinian theory of evolution, being a firm believer in the Bible account of creation, the fall of man and his redemption. He was a mathematician, a fine conversationalist, a close student of history, poetry and the daily papers. Being a veteran of the Civil War he was very impatient in the World War with slackers and indifference. He could not understand why the youth of the land did not at once volunteer their services and thus do away with the draft. His son, Dr. E. A. Alder, had accepted a commission in the M. R. C. and had been gone from home only four days when his father died.

Although nearly seventy-six years old, he showed no signs of dotage and was active and busy when death struck him. In his forty years of practice he had a wide and varied experience. He had met and diagnosed some of the rarest of maladies, that one meets in a lifetime. He had one of the most complete records of his obstetrical cases, including name, age of mother, primipara or multipara, sex, presentation, forceps, and any other complication which may arise, such as eclampsia, deformity, convulsions, etc. He was a member of the Cedar County Medical Society, Missouri State Medical Association and a Fellow of American Medical Association.

In the passing of Dr. J. E. Alder we note one more sign of the passing of the family doctor, beloved, esteemed and respected. In his death the family lose a devoted father, the community a friend and counselor, the country a patriotic citizen, and the medical profession sustain an irreparable loss.

He was buried in Fullerton cemetery, near his home, with the beautiful service of the Masonic fraternity, conducted by the lodges from Dadeville, Stockton and Greenfield.

JANE E. DUNAWAY, M.D.

## NEWS NOTES

It is reported that Dr. O. C. Sheley of Independence, a member of the Jackson County Medical Society, has been seriously ill.

DR. W. V. SMITH of Kansas City was found guilty by a jury of selling habit forming drugs in violation of the antinarcotic law and fined \$250.

A SITE for the Callaway County hospital has been selected by the board of trustees at Fulton. The county recently voted to issue \$75,000 worth of bonds for the erection of a county hospital.

DR. CHARLES P. EMERSON, dean of the Medical School and professor of medicine in the University of Indiana, delivered an address before the St. Louis Medical Society at its meeting on February 15 on the subject of "Headache."

A PHYSICIAN is much needed by the people in and around Friedheim, Cape Girardeau County, Mo. On another page we publish a letter from Rev. W. C. Borchers to which we invite the attention of members who may be interested in this location.

LIEUT.-COL. JOHN M. BINNIE of Kansas City is on his way home from France and expected to arrive March 1. Colonel Binnie was in charge of the Base Hospital Unit 28 when he was sent overseas but was later made chief consulting surgeon of the Third Army Corps and afterward appointed chief consulting surgeon for all the base hospitals at Limoges.

THE training school for nurses at the State Hospital No. 4 has proved very successful according to reports from the superintendent. Frequently the lectures are attended by medical officers, the employees and their families. A noticeable result is a better understanding of the benefits of sanitation and hygiene and a pronounced interest in the object of ventilation and heat.

DR. W. J. FERGUSON of Sedalia has been re-appointed a member of the State Board of Health in the place of Dr. A. W. McAlester. Dr. Ferguson was president of the State Board of Health when he accepted a commission in the Army and Dr. McAlester was appointed to fill the vacancy thus created. On the return of Dr. Ferguson, Dr. McAlester resigned and requested that Dr. Ferguson be reappointed to his old position.

THE town of Bellevue, Mo., is in need of a physician. Bellevue is in Iron County, eighty miles southeast of St. Louis, and five miles off the Iron Mountain Railroad. There are good automobile roads and the community is one that will support a good doctor. The physician who was in the town has not returned from the war and the people appeal to us to let their need be made known. Members who are interested may address Mr. T. E. Bell, Bellevue, Iron County, Mo.

FOUR chiropractors were arrested in St. Louis on February 28 at the instance of the health department, charged with unlawfully holding out as physicians. The representatives of the health department assert that they consulted the four chiropractors on different dates and that each member of the fraternity of spinal manipulators diagnosed a malady, although both of the investigators were in perfect physical condition, and charged fees for their medical opinions.

A JOINT influenza committee has just been created to study the epidemic and to make comparable, so far as possible, the influenza data gathered by the government departments. The members of this committee, as designated by the Surgeon-General of the Army, the Surgeon-General of the Navy, the Surgeon-General of the Public Health Service, and the Director of the Census, are: Dr. William H. Davis, chairman, and Mr. C. S. Sloane, representing the Bureau of the Census; Dr. Wade H. Frost and Mr. Edgar Sydenstricker, of the Public Health Service; Col. D. C. Howard, Col. F. F. Russell, and Lieut.-Col. A. G. Love, United States Army; Lieut.-Com. J. R. Phelps and Surgeon Carroll Fox, United States Navy.

A CONFERENCE of hospital directors and those interested in standardizing hospital work was held in St. Louis February 19. Dr. Harvey G. Mudd was chairman of the conference and quite a number of physicians took part in the proceedings. It is said to be the first of a number of similar conferences to be held at various points throughout the country under the direction of Lieut.-Col. J. A. Hornsby, M. C., U. S. A., representing the American College of Surgeons. Those who took part in the discussion at St. Louis are Mr. John Schmoll, director of Public Welfare; Dr. L. H. Burlingham, Dr. William Engelbach, Dr. C. H. Shutt, Dr. George Dock, Mr. Aaron Waldheim, president of the Jewish Hospital, and George D. Markham, chairman Charities Committee of the Chamber of Commerce. Two important phases of hospital work were especially emphasized at the meeting, namely, keeping accurate case records and the necessity of a hospital laboratory. Staff organization of hospitals was also discussed.

THIRTY-TWO physicians in Kansas City have volunteered their services for medical inspection of the children in the public schools. Many of the citizens of Kansas City, especially the mothers with enlightened ideas of modern methods of preventing disease, have repeatedly petitioned the local board of health to establish a system of medical inspection of school children, but all efforts in this direction have proved

futile. It is said that the parochial schools provide medical inspection for their pupils. Some work has been done in public schools through the generosity of private citizens and the voluntary cooperation of members of the Jackson County Medical Society, but as yet the city authorities have not assumed the responsibility that should be theirs in protecting the children and the general public from the spread of communicable diseases originating among school children.

A DISASTROUS fire almost destroyed St. Mary's Hospital at Jefferson City on February 20, endangering the lives of patients and nurses. There were seventy-one patients in the hospital when the fire broke out but all were removed to nearby residences, the governor's mansion and other homes, without accident to any of them. The fire started near the elevator shaft and through this channel spread rapidly through the upper stories to the roof where it was confined by the fire department. The damage to the building was estimated at \$50,000, partially insured. The public-spirited citizens have begun steps for the immediate reconstruction of the building. The hospital has served a wide territory in the central part of the state and the temporary loss of its facilities will be severely felt by a large number of people.

DURING February the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Nonproprietary articles: Biologically Reactive Food Proteins.

Merck and Company: Tannin Albuminate Exsiccated-Merck.

E. R. Squibb and Sons: Cow's Milk Allergens-Squibb; Egg Allergens-Squibb; Wheat Allergens-Squibb.

Takamine Laboratory: Neoarsaminol, 0.15 Gm. Tubes; Neoarsaminol, 0.3 Gm. Tubes; Neoarsaminol, 0.45 Gm. Tubes; Neoarsaminol, 0.6 Gm. Tubes; Neoarsaminol, 0.75 Gm. Tubes; Neoarsaminol, 0.9 Gm. Tubes.

Dermatological Research Laboratories: Neoarsenobenzol.

Guiseppe W. Guidi: Ittiolo.

Merck and Company: Digitan: Digitan Tablets, 1½ grains; Quinine Ethyl Carbonate-Merck.

Monsanto Chemical Works: Chlophamine-T, Monsanto.

## MEMBERSHIP CHANGES, FEBRUARY

### NEW MEMBERS

Baker, Henry A., Kansas City.  
Breed, Maurice Edward, St. Louis.  
Bullis, Florence H., St. Louis.



Cantrell, I. J., Springfield.  
 Combs, M. C., Bronaugh.  
 Cowden, W. H., Springfield.  
 Farrington, Owen P., Greentop.  
 Fredericks, Edward L., Vanduser.  
 Freeman, S. F., Springfield.  
 Harmon, B. R., Springfield.  
 Hickok, H. S., Kansas City.  
 Hill, William H., Kansas City.  
 Knappenberger, George, Kansas City.  
 Lucas, William B., Mendon.  
 McGhee, J. L., Williamsville.  
 Meyer, Oscar, St. Louis.  
 Mitchell, R. E., Licking.  
 Morey, Otis T., Salisbury.  
 Paxon, Charles Evan, Hannibal.  
 Phelan, Richard A., St. Louis.  
 Schaff, Guido, Moundville.  
 Shackelford, Horace, H., St. Louis.  
 Silverman, Dora J., St. Louis.  
 Stock, George Andrew, Webb City.  
 Striegel, B. F., St. Louis.  
 Thomas, A. W., Springfield.  
 Tucker, C. A., Springfield.  
 West, William D., Mendon.

## CHANGES OF ADDRESS

Appleberry, Reuben, Leadwood to Bonne Terre.

Atherton, Mary J., Junction City, Kan., to Chicago, Ill.

Barlow, Nathan, 3867 Lafayette, St. Louis, to 9300 S. Broadway.

Barnes, J. N., 1717 N. Jefferson Ave., St. Louis, to 404 Union Oil Bldg., Los Angeles, Calif.

Detweiler, A. J., Columbia to Hannibal.

DeVilbiss, Edgar F., 3001 Lydia, Kansas City, to 3001 Paseo.

Eber, Carl T., Mullanphy Hospital, St. Louis, to Northwestern Bank Bldg., Fifteenth and St. Louis Ave.

Engelbach, William, Humboldt Bldg., St. Louis, to 923 University Club Bldg.

Farrar, John O'F., 606 Carleton Bldg., St. Louis, to 3540 N. Grand Ave.

Good, Clarence A., 110½ N. Ninth St., St. Joseph, to Bartlett Bldg.

Greene, Charles F., Bakersfield to West Plains.

Hancks, J. A., Koenig, Mo., to Wamego, Kan.  
 Hatch, Fred, 311 Argyle Bldg., Kansas City, to 810 Argyle Bldg.

Hearst, Allen L., 700 Shukert Bldg., Kansas City, to 3215 Roberts.

Hendrix, J. F., Peace Valley to Pomona, Route No. 1.

James, J. D., 540 E. Commercial St., Springfield, to 1703 Broad St.

Kyger, F. B., 700 E. Thirty-First St., Kansas City, to 4046 Michigan.

Lawson, Sidney, 101½ W. Missouri Ave., St. Joseph, to Georgetown Bldg.

Mandelaris, George, 305 Navarre Bldg., St. Louis, to 802 Chestnut St.

McCubbin, J. B., Fulton to Laddonia.

Mynatt, Abner, Jerico Springs to Lamar.

O'Kelly, Frank M., Sikeston to 230-231 Frisco Bldg., Joplin.

Parker, James Harold, Fulton to Lapeer, Mich., care Home and Training School.

Pettijohn, A. C., Vinita, Okla., to Dr. C. R. Woodson Sanitarium, St. Joseph, Mo.

Reddington, J. D., Barnes Hospital, St. Louis, to Jewish Hospital.

Reyling, F. T., 1230 Rialto Bldg., Kansas City, to 409 Argyle Bldg.

Ruble, Elmer Lee, 1221 Rialto Bldg., Kansas City, to 1418 E. Thirtieth St.

Sampson, Chris M., Physicians and Surgeons Bldg., St. Joseph, to Old Corby Bldg.

Scherer, P. H., 229 Frisco Bldg., St. Louis, to 1701 a S. Broadway.

Sillyman, William T., Bucyrus to Theron.

Simpson, Guy L., 3530 N. Taylor, St. Louis, to 4940 Wabada.

Stocking, L. C., Delmar Bldg., St. Louis, to University Club Bldg.

Strieby, Ulysses G., Brownington to Syracuse, Ind.

Sutton, R. L., 726 Lathrop Bldg., Kansas City, to 1034 Rialto Bldg.

Tate, P. S., Farmington to 1134 E. Forty-Seventh St., Chicago, Ill.

Thompson, Henry A., Lanton to West plains.  
 Tuholske, Lister, 4453 McPherson, St. Louis, to 4515 Pershing Ave.

Walker, Evaln R., R. T. J. Bldg., Sedalia, to 312½ S. Ohio St.

Williams, William E., Burton to Fayette.

## TRANSFERRED

Cunningham, Josiah B., Hockerville, Okla., from Howell County Medical Society to Oklahoma State Medical Society.

Pinquard, Joseph, Pinquard Bldg., Kingsport, Tenn., from Howell County Medical Society to Tennessee State Medical Society.

## DROPPED

Asbury, L. M., Dalton.

Davault, W. W., Shawneetown.

Frank, Walter E., St. Louis.

Gay, Ray J., New Hartford.

Green, Philip P., St. Louis.

Huse, Grace, Gainsville, Texas.

Kassmeyer, John C., Durand, Ill.

Lamb, David R., St. Louis.

Luckey, H. L., St. Louis.

Mandelaris, George, St. Louis.

May, Albert, St. Louis.

Missimore, Louis E., St. Louis.

Roberts, Edwin H., Washington, D. C.  
Rutherford, Orra L., Bellflower.  
Stewart, James, St. Louis.  
Stewart, William C., Kenosha, Wis.  
Vandover, Samuel T., St. Louis.  
Wall, Otto A., Jr., St. Louis.

RESIGNED

Miller, Frank P., Urich.  
O'Donnell, Alfred, Ellsworth, Kan.

DECEASED

Bradley, E. H., Springfield.  
Carr, Lawrence T., Martinsburg.  
Harris, James A., Mount Vernon.  
Hess, John D., Clarkton.  
Holt, Elmer E., Mena, Ark.  
Kern, John H., St. Louis.

CORRESPONDENCE

PHYSICIAN NEEDED

FRIEDHEIM, Mo., Feb. 28, 1919.

*To the Editor:*—A few days ago I wrote to Dr. Robinson, acting Dean of Washington University, and asked him to help us get a doctor for our territory here, our former physician having moved to Cape Girardeau to take up city practice, after having been here about twenty years. Dr. Robinson advised me to write you and expressed the hope that you might be able to help us obtain a physician here.

Friedheim is in Cape Girardeau County, Mo. It is only a small village, if it might be called that, surrounded on all sides by farming community. The physician here would have a territory consisting of a radius of ten miles around Friedheim. The people living here are all farmers, and most all own their own farm. There are comparatively few poor people and few renters. Financially, a doctor has a good chance here. The physician formerly here made good money and became wealthy. Through the former doctor's removal we have been left in a very bad shape, particularly as there are at present many sick people, and we are compelled to call physicians from a long distance.

Now, Dr. Goodwin, our request is that you kindly help us to find someone who is willing to take up country practice, and there is no doubt he can make a success of it financially. If anyone wishes to look into this matter further he can refer to Mr. William Klaus, Friedheim, Mo., our merchant here, or else to the undersigned.

Thanking you in advance for any favor you may do us in this matter.

REV. W. C. BORCHERS.

TREATMENT OF PNEUMONIA  
FOLLOWING INFLUENZA

NEW BLOOMFIELD, Mo., Feb. 18, 1919.

*To the Editor:*—Apply the vibratory current from an ordinary medical battery of two or three dry cells over or rather through each lung (the right then the left, respectively) for twenty to thirty minutes each in the following manner: Apply the positive pole below and the negative pole above on the right lung and vice versa on the left.

If your battery is working well, the rheotome should be humming a constant note like a string of a piano. Move the poles about over the chest wall as needed, being careful to keep one in front the other behind, while the battery is in operation. The poles should be of sponge or metal plates and should always be wet with warm water when in use.

The cutting or stab-like pain that will be felt always indicates a focus of congestion; pneumonic centers may be found in this way that cannot be located by the stethoscope or the unaided ear.

I have tried this in several cases of pneumonia with influenza, some of the most hopeless cases that I have ever seen, and all, without exception, have recovered. So strong is my confidence in the efficacy of this treatment that I give it as my unqualified opinion that in the Middle West (perhaps anywhere) every case of pneumonia with influenza would recover if treated in this manner.

Any good electrical supply company should be able to supply batteries to those who are willing to try them.

Those who desire a more detailed explanation of the technic may send stamped envelope and I will do the best I can for them.

E. L. HUME, M.D.

FIRST AID INSTRUCTION IN  
PUBLIC SCHOOLS

*To the Editor:*—The enclosed article on the Red Cross First Aid Instruction in Public Schools is self-explanatory.

I am asking you with all other editors of state journals in the Southwest to publish this in your journal. The reason for my request for publication is because the American Red Cross wishes the physicians in your state to understand the organization of this course and desires their cooperation in making the course a part of each high school curriculum.

Yours very truly,

F. G. PERNOUT, M.D.,

Division Director, First Aid, Southwestern Division.



The article follows:

A knowledge of ordinary First Aid methods has been generally recognized by public health officials, medical organizations and individuals as essential because of the increasing complexities of modern industrial life.

Convincing proof of the necessity for the work of the Red Cross in First Aid instruction will be found in a study of the following facts:

It has been conservatively estimated that between 90,000 and 100,000 fatal accidents occur annually in the United States, and that five times that number of accidents occur which so disable individuals that they can no longer earn their own living. Computing the earning capacity of each of this latter group at the low rate of \$500 per annum, gives an aggregate loss of wages of \$250,000,000 annually. These figures, of course, take no account of the suffering and sadness brought into thousands of homes, which cannot be measured in terms of dollars and cents, the charges for medical care, the expense incurred, by legal claims and damage suits, or the loss to employers.

According to the Interstate Commerce Commission there were 206,723 casualties on the steam railways of the United States for the year ended Dec. 31, 1916, of these 10,001 were deaths. These figures show an increase over the year ended Dec. 31, 1915, of 1,371 in the number of persons killed and 34,835 in the number injured.

The United States Bureau of Mines reports for 1916 show that out of a total of 720,971 men employed in the coal mines of the United States, 2,226 were killed, or, to put it more graphically, one life was sacrificed for every 265,000 short tons of coal produced.

Recognizing these facts, the American Red Cross has begun a movement through the various divisional offices, with the consent and cooperation of the state superintendents of public schools concerned, to place on the school curriculum of all high schools a course in First Aid instruction.

The American Red Cross has for many years supervised the formation and teaching of classes in First Aid. These classes were voluntary, and designed for adults. The greatest number of those availing themselves of this course were women who through this course became fitted to take care of most household emergencies, though minor usually in character from an overwhelming percentage of all injuries. The greatest number of severe injuries occur among men about their work. With this fact in mind the American Red Cross has endeavored to reach this type of injury, and has trained many men in factories and mills.

It is obvious that this type of teaching is unsatisfactory as it is all voluntary and depends wholly on the enthusiasm and energies of a certain few who may see the necessity for this work and develop the class. It will also be noted that the class must be held outside of working hours, so that the classes as a rule are not as receptive to instruction as would be generally believed. It has been found that a majority of the classes formed were women. The one place then where we can be sure of reaching a larger number of the male sex, and of reaching both sexes at a time when right reactions are readily set up, is in the high or preparatory school. And the ideal time for such teaching is in the second year of such schools, because having mastered the principles of First Aid, the pupil has an opportunity to apply them to all the little mishaps that characterize school activities in the gymnasium, in the athletic field, in the manual training shop, about their homes and outdoor sports and games.

It is only necessary to cause you to think how many children gather about an injured person, an

ambulance or an accident of some kind to show you the natural enthusiasm which exist in children for this subject. The proposed course will be one of the most interesting of their high school work and because of the natural enthusiasm the greatest possible good can be accomplished.

## MISCELLANY

### NATIONAL PRESTIGE IN SCIENTIFIC ACHIEVEMENT

We envied Germany her diligent, productive scientists, smiled at her many false claims to superiority and originality, contributed rather freely to German scientific literature, with some qualms of conscience, and pretty generally despised German technologists for their piratical methods. "How do they ever get away with it?" we asked ourselves and let it go at that. It never occurred to many of us to assert our scientific independence as a matter of national duty and Germany was rapidly attaining the leadership she craved. In penance we now burn our German books and studiously avoid reading anything in that language. We are surprised to find how well we can get along without anything in that language and for how little we are really indebted to that nation.—Dr. P. G. Nutting in *Science*.

### DECLARATION OF CHEMICAL INDEPENDENCE IN THE UNITED STATES

The chemists of America never concerned themselves with the prostitution of science, but called on to provide our nation with the new diabolic arms of modern scientific warfare developed by a militaristic autocracy, they served ably and completely. Our eminent success is a cause of pride to every American. In three years American chemical genius has done as much and as well as Germany has during three-quarters of a century. This sudden unparalleled achievement will affect our chemical industry for a century. That Monday morning when the last gun was fired we passed into a new age—the beginning of an era of chemical progress, of chemical independence in this country, of research in the unfolding of the secrets of nature to make for a longer, happier life for man, of constructive productiveness for the universal brotherhood of man.—Dr. P. G. Nutting in *Science*.

### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY

Aber, W. H., Aullville; Anderson, W. C., Kansas City; Appleberry, R., Bonne Terre; Aufderheide, William A., St. Louis; Austin, M. B., Brunswick.

Bartlett, Ezekiel M., Houston; Bigsby, F. L., Kirksville; Blankenship, E. P., Houston; Boehm, J. D., Monett; Bokhof, D. H., West Line; Boogher, F., St. Louis; Bowers, J. S., Granby; Bragg, G. G., Huntsville; Brewington, G. F., Bevier; Bridges, J. R., Kahoka; Brown, J. Y., St. Louis; Bruce, J. R., Marshfield; Bryan, R. S., St. Louis; Burford, C. E., St. Louis; Burns, S. S., St. Louis; Butler, O. W., Kansas City; Byrd, R. L., St. Louis.

Caldwell, V., Popular Bluff; Callaghan, Richard, Kansas City; Calvert, H. A., Smithville; Campbell, A. J., Sedalia; Carley, H. D., St. Louis; Carthrae, L., Jr., Corder; Cartwright, C. P., Hughesville; Castles, J. E., Kansas City; Cecil, C. E., Flat River; Christie, J. D., Bevier; Coats, C. C., Winston; Cook, J. T., St. Louis; Cook, S., Quilin; Cooper, J. F., Hannibal; Crawford, H. S., Harrisonville; Crawford, J. R., Kansas City.

Davis, H. B., Kansas City; Dawson, L. V., Kansas City; Dean, J. W., Pond; Dierkes, C. J., St. Louis; Dodson, C. L., Moberly; Dodson, J. F., Kirksville; Dowell, H. S., Clearmont; Dudley, C. E., St. Louis; Dyer, C. P., St. Louis; Dysart, W. P., Columbia.

Eber, C. T., St. Louis; Eck, P. A., St. Louis; Edmondson, J. L., Stella.

Farmer, Lee Roy, Lees Summit; Fay, H. W., St. Louis; Ferguson, John D., Ava; Ferguson, L. J., Brookfield; Fisher, Amos T., Kansas City; Fogle, R. L., Otterville; Ford, W. W., Gordonville; Fulbright, J. H., Springfield; Fulton, W. L., Mount Vernon.

Gammage, T. R., Kansas City; Gardner, E. L., Rushville; Gibbs, C. A., Greensburg; Goldstein, M. A., St. Louis; Good, Clarence A., St. Joseph; Greene, L. B., Kansas City; Griot, G. A., St. Louis; Gronoway, T. P., Bevier; Gross, J. H., Webster Groves.

Haffner, E., Hermann; Hall, R. G., Fulton; Hamilton, E. P., Kansas City; Hamlin, J. R., La Grange; Hammersley, G. O., Campbell; Hansen, W. J., St. Joseph; Hartman, J. A., St. Louis; Hayden, J. G., Kansas City; Hertlet, A. L., St. Louis; Hereford, R. G., Ashley; Holt, S. W., Steffenville; Horrom, G. W., Rolla; Hunt, W. J., St. Joseph.

Ingram, W. C., Browning.

James, J. D., Springfield; James, R. M., Joplin; Jude, J. J., St. Louis; Jones, A. E., Kansas City; Jones, R. E., Vichy.

Kaemmerling, G. G., Joplin; Keeling, F. V., Elsberry; Kelly, R. Q., Buncheon; Kirsch, F. W., St. Louis; Klippel, B. W., St. Louis; Kring, R., St. Louis.

Laws, C. J., Princeton; Leaming, H. A., Joplin; Leonard, P. I., St. Joseph; Levens, W. B., Creighton; Link, E. X., St. Louis; Loeb, H. W., St. Louis.

Mabee, J. R., Huntsville; Major, R. H., Kansas City; Mankopf, B. E., New Haven; Manning, D. G., Marshall; Marten, W. F., St. Louis; Mathias, E. L., Kansas City; May, B. F., St. Louis; Mayes, O. B., Centralia; McCall, G. D., Fulton; McCartney, O. P., Kansas City; McCornack, G. C., St. Louis; McCubbin, J. B., Fulton; McCulloch, G. A., Excelsior Springs; Meade, R. H., Kansas City; Megee, O. K., Moberly; Meredith, A. L., Prairie Home; Meredith, J. J., St. Louis; Meredith, O. O., Breckenridge; Meyers, H. A., Sedalia; Miller, L. B., Kansas City; Mitchell, E., Lamonte; Moershel, H. G., St. Louis; Monroe, L. E., Bonne Terre; Montgomery, J. G., Kansas City; Moreland, G. H., Kansas City; Moore, C., Advance; Moulder, J. D., Linn Creek; Mount, R. L., Polo; Muller, C. Q., St. Louis; Murphy, Edward S., St. Louis; Murphy, F. T., St. Louis.

Nixon, J. W., Kansas City; Norton, H. B., Center. O'Connell, J., St. Louis; O'Dell, T. T., Marionville; Opie, E. L., St. Louis; Orr, C. A., Mendon; Ottman, J. C., Craig; Outland, J. H., Kansas City; Owen, H. I., Fulton.

Patrick, P. L., Marceline; Paxon, C. E., Hannibal; Peelor, Edwin C., Clinton; Phelan, R. A., St. Louis; Pierce, D., Newark; Pitzman, M., St. Louis; Poe, J. D., St. Louis; Porter, Emerson S., Milan; Porterfield, E. P., St. Louis; Powers, E., Carthage; Powers, H. C., Joplin; Proetz, A. W., St. Louis.

Ragan, S. H., Kansas City; Raines, O. C., St. Louis; Randle, H. T., St. Louis; Ravold, A. N., St. Louis; Ray, J. E., Kansas City; Redington, J. C., St. Louis; Richards, T. C., Fayette; Ringen, A. H., Sweet Springs; Roberts, S. E., Kansas City; Ruble, E. L., Kansas City; Rudd, W. E., Salem; Russell, J. M., Monett.

Sampson, Chris M., St. Louis; Sawyer, T. T., Kansas City; Schlueter, Robert E., St. Louis; Schmidt, I. H., St. Louis; Schwartz, F. O., St. Louis; Shafer, F. M., Osborn; Sharon, F. F., Kansas City; Sharpe, N. W., St. Louis; Shaw, F. W., Mount Vernon; Smith, D. O., Kansas City; Smith, F. J., St. Louis; Smith, L. L., Bethel; Snider, J. S., Kansas

City; Sparhawk, W. J., St. Louis; Spaulding, L. M., Olean; Stacy, E. W., Princeton; Stapp, J. H., Hardin; Stewart, S. S., St. Louis; Stratton, C. S., Roscoe.

Tate, B. F., St. Louis; Thornburgh, A. H., West Plains; Toomey, T. N., St. Louis; Torn, J. L., Williamsville; Tucker, C. A., Springfield.

Van Allen, J. P., Cole Camp; Van Eman, Fred, Kansas City; Van Ravenswaay, C. H., Boonville; Viehe, R. F., St. Louis; Vierling, O., St. Louis.

Walker, E. R., Sedalia; Werner, A. A., St. Louis; Wiesner, B. J., St. Louis; Will, Waldo H., Jefferson Barracks Station, Route 8; Witten, H. O., St. Joseph; Worth, D. S., Kirkwood; Wright, D. P., St. Louis.

## BILL TO INCREASE EFFICIENCY OF STATE BOARD OF HEALTH

The following is the text of the bill prepared by the State Board of Health to give the board adequate powers for controlling communicable diseases throughout the state:

*Be it enacted by the General Assembly of the State of Missouri, as follows:*

SECTION 1.—That Sections 6653, 6654, 6655, 6656, 6662 and 6663 of an act entitled "Laws Governing Public Health," as it appears in Chapter 53, Article I, Revised Statutes 1909, be and the same are hereby repealed, and new sections to be known as Sections 6653, 6653A, 6653B, 6654, 6655, 6655A, 6656, 6662 and 6663 of said act, are hereby enacted in lieu therefore, as follows:

SECTION 6653.—Powers and duties of the board. It shall be the duty of the state board of health to safeguard the health of the people in the state, counties, cities, villages, and towns. The board shall take any action that it deems necessary and it is hereby empowered to take such action to protect and promote the health and sanitary interests of the citizens of the state. It shall make a study of the causes and prevention of diseases, and shall have full power and authority to use any means it deems necessary to prevent the entrance of dangerous diseases from without the state. It may send representatives to public health conferences when deemed advisable and the expenses of such representatives shall be paid by the state as provided in this act for expenses of the members of the state board of health.

SECTION 6653A.—Designate diseases; rules and regulations.—The board shall designate those diseases which are infectious, contagious, communicable, or dangerous in their nature and shall make and enforce adequate rules, regulations and procedures to prevent the spread of those diseases and to determine the prevalence of said diseases within the state.

SECTION 6653B.—Establish subdivisions.—In addition to the divisions of vital statistics and laboratories already established, the board shall establish the following divisions: Preventable diseases, including tuberculosis; child hygiene; venereal diseases, and other divisions as it may deem necessary from time to time. The board shall formulate rules and regulations for the proper conduct of these divisions.

SECTION 6654.—Commissioner of health.—A commissioner of health may be selected by the board who shall be a physician skilled in sanitary science and experienced in public health administration. It shall be his duty to enforce the rules and regulations of the board and he shall submit to the state board of health an annual report with his recommendations.

SECTION 6655.—Deputy state commissioners of health for counties and cities.—At the February term of court of each county in the state, the court shall select and endorse to the state board of health a repu-



table physician for appointment by the board as a deputy state commissioner of health for that county. In case of vacancy in the office of the deputy state commissioner of health of a county, the county court shall at its next regular term of court select and endorse a reputable physician for the unexpired term as above provided. If such selection and endorsement be not made at the February term of the county court, or at the next term following a vacancy, the state board of health shall appoint a deputy state commissioner of health for that county, who shall serve until the court selects and endorses a physician for appointment. The county court shall pay the physician appointed a reasonable compensation and all reasonable expenses incurred in the performance of his duties as deputy state commissioner of health for that county, out of the county treasury, provided that the health officer in incorporated cities which maintain a health department and meet the requirements established by the state board of health, shall be appointed by the state board of health as a deputy state commissioner of health for that city; the said health officer shall be compensated for his services in the manner now provided or as may be provided by the charter or ordinance of that city.

**SECTION 6655A.—Duties and jurisdiction of deputy state commissioner of health.**—It shall be the duty of the deputy state commissioners of health for the counties to enforce the rules and regulations of the state board of health throughout their respective counties outside of incorporated cities which maintain a health officer as provided for in Section 6655. The deputy state commissioners of health for incorporated cities shall enforce the rules and regulations of the state board of health within their respective cities. Any deputy state commissioner of health who neglects or refuses to perform his duties as required by this act shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not less than \$10 nor more than \$50.

**SECTION 6656.—Rules and regulations prescribed to supersede.**—All rules and regulations authorized and made by the state board of health in accordance with this act shall supersede as to those matters to which this act relates all local ordinances, rules and regulations and shall be observed throughout the state and enforced by all local and state health authorities. Nothing herein shall limit the right of local authorities to make such further ordinances, rules and regulations not inconsistent with the rules and regulations prescribed by the state board of health which may be necessary for the particular locality under jurisdiction of such local authorities.

**SECTION 6662.—Penalty for violation.**—Any person or persons violating, refusing or neglecting to obey the provisions of this act or any of the rules and regulations or procedures made by the state board of health in accordance with this act, or who shall leave any pest-house or isolation hospital or quarantined house or place without the consent of the health officer having jurisdiction, or who evades or breaks quarantine or knowingly conceals a case of contagious, infectious, or communicable disease, or who removes, destroys, or tears down any quarantine card, cloth or notice posted by the attending physician or by the health officer or by direction of a proper health officer, shall be guilty of a misdemeanor and upon conviction thereof shall be subject to a fine of not less than \$25 nor more than \$200 or to imprisonment in the county jail not to exceed ninety days or to both such fine and imprisonment.

**SECTION 6663.—Former acts repealed.**—All acts or parts of acts in conflict or inconsistent with this act are hereby repealed.

## EVERGREEN—GENERAL HOSPITAL NO. 7, BALTIMORE, MD.

### Where Blinded Soldiers, Sailors and Marines in the Military Service of the United States Are Being Fitted to "Carry On" in the Battle of Life

"Evergreen," as General Hospital No. 7 is popularly known, is the place to which the soldiers, sailors and marines are sent who have lost their sight as a result of the world war.

The institution has a double function: (1) That of a hospital for the men while they are in need of medical care; and (2) a school in which they are fitted to "carry on" in the battle of life in spite of blindness.

This hospital and school is located in Guilford, one of the beautiful suburbs of Baltimore, on the 100 acre estate of Mrs. T. Harrison Garrett, who has generously loaned the property to the government for the use of the blind men.

The property was officially taken over by the government on Nov. 15, 1917. Owing to the congestion of transportation the actual construction of the government buildings was not begun until April 6, 1918. The first blind man was admitted the same month, the buildings which were already on the estate being used for residential purposes.

#### THE AIM OF EVERGREEN

The aim of Evergreen is to equip the blind man so that on his dismissal from the service of the United States he may take his place as a self-supporting, self-respecting individual in society, or be prepared to receive further instruction under the guidance and at the expense of the Federal Board for Vocational Education.

#### COURSES OF STUDY AND WHY

The patients at Evergreen are either totally blind or have such defective vision that they are precluded from reentrance into usual occupations or even normal home life without some training. So completely will their lives be changed that it will be necessary for them to pass through a period of mental readjustment and physical readaptation before they can thoughtfully weigh plans for the future. The obvious first duty of those charged with the instruction of these men is to see that they are safely conducted through this serious transitional period.

The difficulties confronting the instructors can only be appreciated when it is understood that the blind have to be taught even the simplest conventions of life, such as walking with freedom, handling their food, dressing, etc. The difficulties to be overcome in the teaching of the blind are many and only by close cooperation between teachers and pupils can any real progress be made. The paramount duty of those charged with the organization of this important work was the choice of a well balanced staff of teachers who, through experience and training, could visualize the results of the methods of instruction to be adopted.

In this selection, the advice of experts in the education of the civil blind was sought and it is confidently hoped that the selections will be more than justified.

To work under the direct supervision of these instructors, as "teachers' aides," a class of volunteer assistants has been provided by the Red Cross Institute for the Blind. These aides receive their instruction in classes conducted by the professional teachers.

If it is borne in mind that despair is the natural reaction of those who are suddenly stricken with blindness, it will be readily appreciated that Evergreen cannot be used solely as a school for trade training and higher education, but that courses have to be arranged to teach the blind men "how to be blind"; to teach them that, though blind, they are still normal men; to impress on them the importance of

observing the usual conventions of life; the necessity for strictly living up to the rules of personal hygiene, of advantages accruing from association with normal people; to afford them an opportunity to develop latent senses so that, in a large measure, these may be substituted for the lost sight.

While the school authorities consider the development of a proper mental attitude as essential to success, they have not neglected to provide courses in wage-earning occupations out of which the blind can be started on the road to financial success.

The educational efforts can be divided into required and selective courses. Among the required courses are physical training, fundamental hand training, reading and writing of Braille and typewriting. Physical training includes personal hygiene, swimming, bowling, outdoor sports and gymnasium exercises.

Those who have recently become blind must be helped to see the dawn of their new life as early as possible. To prevent a wrong attitude, either mental or physical, there is a recreational leader who provides entertainment for the men during their free time. Thus, dances, music, amateur theatricals, theater parties and kindred entertainments are as important for a blind man as work. One of the men has well said, after a dance, "we work the better for it."

The handwork course, or, as one of the teachers has aptly termed it, "the finger kindergarten," embraces weaving, basketry, netting, chair caning and carpentry. The blind must know how to use their fingers to advantage and the larger the range of subjects taught, the more proficient do they become.

As a blind man's fingers must, in reading, take the place of his eyes, the blind at Evergreen are taught Braille, the raised type of the blind (Revised Braille, Grade one and a half). They should thus be able, in a large measure, to supply their own entertainment.

To insure their being able to keep their own records and accounts, they are taught, through the medium of stylus and Braillewriter, to write Braille. As the writing of Braille is not usually used as a means of communication between the blind and their sighted friends, and as there are certain difficulties in the use of pencil and pen, a course in touch typewriting is prescribed. While the main object of this typewriting course is to give the men a means of communication, it can be developed as a means of livelihood, where education and previous training make it seem desirable, and when taught in conjunction with the dictaphone and stenography, its possibilities become at once apparent.

When we come to consider the elective courses every man receives individual treatment and many factors must be considered. The man must, if the environment is suitable, be returned to his home; his previous occupation must be weighed, because it is desirable to utilize, in so far as possible, his previous training; the opportunities for occupation in his home community must be known; his history as a worker, his stability of character and his temperament must be understood. As the path of least resistance leads to the choice of an occupation by the man himself, the staff finds it advisable to suggest rather than to dictate.

The following is a classification of elective courses as planned for vocational training: professional, commercial, industrial, agricultural and home work.

The professional work, except for such subjects as massage, piano tuning and bookbinding, will be under the direction of the Federal Board of Vocational Education, and will not be undertaken until the preliminary (or required) training of the military school has been completed.

It appears quite probable that commercial work will have to be the most serious occupational effort and, with this idea in view, there are being developed comprehensive courses in business economics, salesmanship, office management, the use of mechanical office equipment and the principles of accounting and

bookkeeping. In this, as in industrial work, it may become necessary, in order to gain practical experience, to place the men in shops and offices. As the Surgeon-General's jurisdiction ceases when the men leave the hospital, this important effort will be under the supervision of the Federal Board for Vocational Education.

Agricultural courses are to be established for those who come from and must return to rural homes. The educational plans embrace classes in poultry raising, dairy farming and market gardening.

## B. IODINE AND B. OLEUM IODINE

### Report of the Council on Pharmacy and Chemistry

The Council has authorized publication of the following report on "B. Iodine" and "B. Oleum Iodine" along with the reply submitted by the manufacturer and a discussion of this reply by the referee in charge of the preparations.

W. A. PUCKNER, Secretary.

Specimens of B. Iodine and B. Oleum Iodine (B. Iodine Chemical Company) and an advertising pamphlet were sent to the Council by John Bohlander, A.M., M.D., with the declaration:

"Well knowing the value of Iodin in surgical operations and dressings, prompted me for the benefit of my fellow physicians as well as myself, and for Humanity's sake, to make Iodin my master-piece in chemistry.

"After several years of diligent work in my private laboratory I succeeded in discovering a new product of Iodin—Nitrogen, hydrate of Iodin."

While "B. Iodine" is said to be nitrogen hydrate of iodine and "B. Oleum Iodine" a 5 per cent. solution thereof, the examination made by Prof. A. H. Clark of the University of Illinois, School of Pharmacy (working in the A. M. A. Chemical Laboratory), indicates that the first is a simple mixture of iodine and ammonium iodid, and the second a solution of iodine in liquid petrolatum. The Council adopted the report of the A. M. A. Chemical Laboratory (which appears below) and declared B. Iodine and B. Oleum Iodine inadmissible to New and Nonofficial Remedies because:

1. The composition is incorrectly declared. B. Iodine is not a newly discovered iodine compound, "Nitrogen Hydrate of Iodine," but a mixture of iodine and ammonium iodid. B. Oleum Iodine is not a 5 per cent. solution of B. Iodine as suggested by the statement on the label and in the advertising, but a solution of iodine in liquid petrolatum containing about 0.85 per cent. of iodine.

2. Since B. Iodine is a mixture of iodine and ammonium iodid, its solution in water will have the properties of other solutions of iodine made by the aid of iodid, such as a dilution of tincture of iodine or of compound solution of iodine (Lugol's solution). Hence, the therapeutic claim that B. Iodine "being of a colloidal nature has the advantage of being more readily absorbed and taken up by all cellular structure, thus getting a perfect cellular medication of Iodine," is unwarranted.

3. The names "B. Iodine" and "B. Oleum Iodine" are not descriptive of the pharmaceutical mixtures to which they are applied.

4. B. Iodine and B. Oleum Iodine are unessential modifications of established articles. B. Iodine has no advantage over tincture of iodine or compound solution of iodine. (As more convenient of transportation, the Medical Department of the U. S. Army supplies its field hospitals with a mixture of iodine and iodid ready for solution in water, either in tablet form or in powdered form in tubes.) Solutions of iodine in liquid petrolatum may be readily prepared (Reports Council Pharm. and Chem., 1917, p. 88).



[CONTRIBUTION FROM THE A. M. A. CHEMICAL LABORATORY]

## B. IODINE PRODUCTS

A. H. Clark, Ph.G., B.S.

"B. Iodine" products are marketed by the B. Iodine Chemical Company, Cincinnati, Ohio; John Bohlander, A.M., M.D., is said to be the discoverer. They consist of "B. Iodine," "B. Oleum Iodine," and "B. Aqua Iodine." B. Iodine and B. Oleum Iodine were submitted to the Council.

In a circular submitted by the B. Iodine Chemical Company, B. Iodine is said to be "Nitrogen Hydrate of Iodin." It is claimed that "coming in contact with water, H<sub>2</sub>O, a chemical change takes place forming Hydro Oxid of Iodin, the Nitrogen of the Nitrogen Hydrate of Iodin escaping, the balance taking up one of oxygen of the water. Its companion, the H<sub>2</sub>, escaping at the same time with the Nitrogen then combining with the remainder of the water to form the solution of Hydrogen Oxid of Iodin; so you can readily see that you really have a pure water of Iodin, nothing but the H, the O and the I."

### B. IODINE

According to the circular, B. Iodine is soluble in alcohol, chloroform, and ether. Also it:

"Has odor, taste, melting and boiling point, same as regular Iodin, has a great affinity for water and will respond to all the tests of Iodin. Appears in a Bluish Black Granulated mass or powder. When heated in vaporating dish will throw off large purple volumes of Iodin leaving a slight white crystalline precipitate, which on continuous heating will entirely disappear. With careful manipulation you can get prismatic needle point like crystals, looking like spores of glass, these dissolving in water will yield pure Iodin coloring the water Iodin.

### "PHARMACOLOGIC, THERAPEUTICAL AND PHYSIOLOGICAL ACTION:

Same as Iodin, being of a colloidal nature has the advantage of being more readily absorbed and taken up by all cellular structure, thus getting a perfect cellular medication of Iodin."

A sample of B. Iodine, marked "Nitrogen Hydrate of Iodin" was submitted by the manufacturers and this sample was examined.

B. Iodine was found to be a granular powder, almost black with a purple cast. It has an odor of iodine and dissolves in water readily. It is also quite soluble in alcohol, but not entirely soluble in chloroform and ether. Ether quickly dissolves iodine from B. Iodine leaving a residue of a white granular substance. Chloroform acts the same as ether except that the iodine is dissolved out with some difficulty. On heating B. Iodine, vapors of iodine escape. If the heating is done on a water bath, a residue of a white granular substance, subsequently identified as ammonium iodid, remains. If heated in a bunsen flame, no residue remains. These tests all indicate that iodine is held in the form of a simple mixture.

*Ammonia:* B. Iodine when mixed with an excess sodium hydroxid and warmed, evolves ammonia.

*Iodine:* 0.1567 gm. B. Iodine dissolved in water required 5.88 c.c. tenth-normal sodium thiosulphate solution indicating 48.28 per cent. iodine. 0.3721 gm. B. Iodine required 14.18 c.c. tenth-normal sodium thiosulphate solution indicating 48.37 per cent. iodine. The average is 48.33 per cent. iodine.

*Ammonium Iodide:* 0.3453 gm. of the residue after heating B. Iodine on a water bath until all iodine had volatilized was dissolved in water, acidulated with phosphoric acid, and hydrogen dioxide solution added. The liberated iodine was extracted with chloroform and titrated with tenth-normal sodium thiosulphate. 23.78 c.c. were required indicating 0.3447 gm. or 99.83 per cent., ammonium iodid.

A mixture of 5 gm. iodine and 5 gm. ammonium iodid has the properties of B. Iodine mentioned above.

The conclusion is that B. Iodine is essentially a mixture of iodine and ammonium iodid in equal parts, the two substances being finely powdered and intimately mixed.

### B. OLEUM IODINE

The following regarding B. Oleum Iodine is quoted from the circular submitted:

"B. OLEUM IODINE: Iodine soluble in mineral oil 5 and 10% for Nasel, Pharyngeal, Laryngeal, Bronchial, Rectal, etc., and all mucoid affections and abnormal conditions of the mucous membrane."

A sample of B. Oleum Iodine was submitted by the manufacturer and examined. The label on the bottle states that it is 5 per cent. B. Oleum Iodine in mineral oil. This sample has the characteristics of a solution of iodine in liquid petrolatum. It is oily and has the characteristic violet color.

*Ammonia:* B. Oleum Iodine, since it is presumed to be a solution of B. Iodine, was examined for ammonium compounds. A small quantity was mixed with an equal volume of strong sodium hydroxid solution and heated. No ammonia was evolved. A few crystals of ammonium chlorid were added to a little of B. Oleum Iodine and treated as above. Ammonia was readily detected.

*Iodine:* 5.255 gm. B. Oleum Iodine was dissolved in chloroform and placed in a separator. A solution of potassium iodid was added and the iodine titrated with tenth-normal sodium thiosulphate solution. It required 3.5 c.c. indicating 0.85 per cent. iodine.

The conclusion is that B. Oleum Iodine is a simple solution of iodine in liquid petrolatum to the extent of 0.85 per cent. and not 5 per cent. as claimed. Furthermore, it is not a solution of B. Iodine since no ammonium compound is present.

The preceding report was sent to the B. Iodine Chemical Company. The following reply was received:

Your letter of the 21st inst., received and contents noted and cannot quite agree with your report.

Reasons why: NH<sub>4</sub>I, a Nitro Hydrate Iodide; NH<sub>4</sub>I<sub>2</sub>, a Nitro Hydrate Iodate; and NH<sub>4</sub>I<sub>2</sub>I<sub>3</sub>. Per Iodide, a molecular compound, which I claim, they all being of a NH group, so what can be the objection of Nitrogen Hydrate of Iodine? Of course when your chemist, with the aid of heat, drove off all the Iodine, he naturally brought it back to a NH<sub>4</sub>I. There's where he gets the A.M. I claim a molecular compound.

The Oil of Iodine I sent you by mistake was a 1 per cent. and not a 5 per cent. as marked. I claim it is made from the resublimed Iodine in mineral oil and not the B. Iodine. I claim a 5 per cent. has heretofore never been accomplished, so I therefore can claim something new.

Tr. Iodine contains Alcohol and Potash as a base, the alcohol a dehydrator and Potash an escharotic, and all other soluble Iodines like the tincture have a metallic base. Mine has not. My iodine is compatible almost with all the salts, alkaloids, tannates, and even the metals. You can't say that for the tincture or the others. Now why should mine not be superior to others?

Preparations as yet are not on the market and a few pamphlets were printed to meet with the requirements of your rulings and approval and shall be corrected if we only can agree on a proper name as you may suggest.

Yours very truly,

THE B. IODINE CHEMICAL CO.

By John Bohlander, A.M., M.D.

P. S. We are sending you under separate cover another sample of the Oil of Iodine which is a 5 per cent. solution, and allowing for deterioration will test at least four per cent.

The referee in charge of the preparations submitted the above letter to the Council with the following comments:

The principal statements in the letter are essentially erroneous or misleading: Mixtures or double salts of ammonium iodid and iodine were not discovered by Dr. Bohlander, and are nothing new. Watery solutions of iodine by means of an iodid have long been known and used in the form of Lugol's solution.

There is no evidence that ammonium iodid is less

irritating than potassium iodid. On the contrary, ammonium salts are generally more irritating than the corresponding potassium salts. B. Iodine is not compatible with alkaloids, but behaves essentially like Lugol's solution. The A. M. A. Chemical Laboratory reports that the new sample of B. Oleum Iodine contains only 1.2 per cent. of free iodine, instead of the claimed 5 per cent. It is therefore somewhat weaker than the iodine petrolatum prepared by the A. M. A. Chemical Laboratory (Reports Council Pharm. and Chem., 1917, p. 88).

However good Dr. Bohlander's intentions may be, the statements that he makes about his products are misleading or erroneous, and the products are ineligible for N. N. R.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1919

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Dec. 14, 1918.  
Webster County Medical Society, Dec. 23, 1918.  
Cedar County Medical Society, Dec. 30, 1918.  
Pike County Medical Society, Jan. 8, 1919.  
Vernon County Medical Society, Jan. 20, 1919.  
Chariton County Medical Society, Jan. 25, 1919.  
Wayne County Medical Society, Feb. 12, 1919.  
Camden County Medical Society, Feb. 14, 1919.

### ST. LOUIS MEDICAL SOCIETY

#### Meeting of Jan. 11, 1919

The meeting was called to order at 8:45 p. m., by the chairman, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

Dr. Ellis Fischel presented a case of "Osteosarcoma of the Face."

Dr. Hanau W. Loeb introduced Col. W. O. Owen, in charge of the Army Medical Museum Surgeon-General's Office, Washington, D. C., who delivered an address prepared in the Surgeon-General's Office, illustrated by moving pictures.

The chair extended personal thanks and the thanks of the society to Colonel Owen.

Dr. Higbee made a motion that Colonel Owen be made an honorary member of the St. Louis Medical Society. Seconded and carried unanimously by rising vote.

On motion the time given to solicit the Patriotic Fund was extended to Thursday, Jan. 16, 1919.

Attendance 103.

JOHN GREEN, JR., M.D., Secretary, pro tem.

#### Meeting of Jan. 18, 1919

The meeting was called to order at 8:45 p. m., by the president, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following: "Myxoedema and Hypothyroidism," by Dr. George Dock.

Discussion by Drs. John Zahorsky, Frank Hinchey, Jules M. Brady, Elsworth S. Smith and William Engelbach; Dr. Dock closing.

"Effect of Castration in the Female," by Dr. William Kerwin.

Discussion by Drs. William H. Vogt, G. D. Royston, Frank Hinchey and William L. Clapper; Dr. Kerwin closing.

Attendance 84.

#### Meeting of Jan. 25, 1919

The meeting was called to order at 8:50 p. m., by the president, Dr. William Engelbach. On motion the reading of the minutes of the meeting of January 18 was dispensed with until the next meeting.

The scientific program consisted of the following:

"A Synopsis of Bone Surgery with a Description of Some Methods; a New Fragment Adjustor and a Simple and Efficient Electric Driven Motor Machine," by Dr. L. A. Milliken.

Discussion by Drs. Carroll Smith and Barney Brooks; Dr. Milliken closing.

"Are Roentgen Ray Moving Pictures a Possibility?" (Illustrated) by Mr. Andrew D. DeWeal.

Discussion by Drs. J. J. Singer and Edward H. Higbee; Mr. DeWeal closing.

"Some Recent Advances in the Treatment of Severe Diarrheal Conditions of Infants," by Dr. W. McKim Marriott.

Discussion by Drs. George Tuttle, Gustav Lippmann and Jules M. Brady; Dr. Marriott closing.

Attendance 33.

#### Meeting of Feb. 1, 1919

The meeting was called to order at 8:45 p. m., by the president, Dr. William Engelbach. The minutes of January 18 and 25 were read and approved.

The scientific program consisted of the following:

"Some Observations of Spinal Cord Surgery with Demonstration of Specimens," by Dr. Ernest Sachs.

Discussion by Drs. Frank R. Fry, William W. Graves, Robert M. Funkhouser and Malcolm A. Bliss; Dr. Sachs closing.

"Case of Hemolytic Streptococcus Infection of Blood with Recovery," by Dr. G. C. McCoy.

Discussion by Drs. George Ives, E. Lee Meyers, and William Engelbach; Dr. McCoy closing.

The secretary read the following resolutions, which were presented by the Committee on Health and Public Instruction:

1. WHEREAS, We learn that the Chiropractor Bill (Senate Bill No. 232), Chiropody Bill (Senate Bill No. 91) and Optometry Bill (Senate Bill No. 209) have been introduced in the general assembly; and

WHEREAS, In our opinion the same are in contravention of the public health; therefore be it

Resolved, That the St. Louis Medical Society most vigorously oppose the passage of bills permitting nonmedical men to tamper with the health of the people; and be it further

Resolved, That we appeal to our senators and representatives to oppose the passage of these bills; and be it further

Resolved, That a copy of these resolutions be sent to the senators and representatives of St. Louis.

2. WHEREAS, The feeble-minded and insane population of the state of Missouri is a vital factor in economy; and

WHEREAS, A survey of the state in respect to this population has never been made; and

WHEREAS, Such a survey can and should be made; therefore be it

Resolved, That the St. Louis Medical Society hereby petition the Hon. Frederick D. Gardner, Governor of the state of Missouri, to invite the National Committee for Mental Hygiene to make such a survey of the state of Missouri without expense to the state; and be it further

Resolved, That the Committee on Health and Public Instruction of the Missouri State Medical Association and its affiliated societies be invited to join the St. Louis Medical Society in this petition to the governor.

On motion the resolutions were adopted.

A letter from the Child Welfare Committee of the Council of National Defense was read requesting the society to assist them in weighing and measuring the children of St. Louis.

On motion this matter was referred to the Committee on Health and Public Instruction.

Attendance 78.



Meeting of Feb. 8, 1919

The meeting was called to order at 8:45 p. m., by the first vice president, Dr. Rudolph S. Vitt, in the absence of the president. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following: "Prostatectomy with Its Preparatory and Post-operative Treatment," by Dr. Bransford Lewis.

Discussion by Drs. H. J. Scherck and E. W. McBratney; Dr. Lewis closing.

"An Unusual Gunshot Injury of the Musculo-Spiral Nerve," by Dr. Francis Reder.

Discussion by Dr. William W. Graves; Dr. Reder closing.

Attendance 50.  
ALBERT F. KOETTER, M.D., Secretary.

PROCEEDINGS OF THE WASHINGTON  
UNIVERSITY MEDICAL SOCIETY

Fifty-Third Meeting, Monday, Nov. 25, 1918

1. THE TREATMENT OF STANDARDIZED  
SHOCK.—By DRs. ERLANGER AND GASSER.

In previous reports before this society it has been shown that by the injection of hypertonic gum acacia and hypertonic crystalloid it is possible to bring back to normal the blood volume and the blood pressure of an animal in shock, and, when the crystalloid consists of sodium bicarbonate, to restore the alkali reserve. Yet shocked animals so treated sometimes die, sometimes recover. For the study of the effects of treatment a standard grade of shock is therefore needed.

Treatment	Total No. of animals	Acceptable cases	Deaths within 48 hrs., per cent.	Deaths within 48 hrs. after excl.; slight hemorrhage, per cent.	Total deaths within 24 hrs.	Deaths within 24 hrs. after excl.; slight hemorrhage	Deaths within 48 hrs. excl. fatal cardiac cases, per cent.	Deaths within 48 hrs. excl. cases 30° + above 40 mm. Hg that lived, per cent.
Controls.....	40	23	48	36.9	4	1	45	61.2
6 in 2% gum-bicarb. ...	27	20	45	35.3	1	1	42	56.3 or 53.0
25 and 5% gum-bicarb.	27	16	56	50.0	8	6	53	69.3
25 and 18% gum-gluc.	43	20	45	35.3 or 31.3	1	0?	39	47.4
25 in 18% gum-gluc. ....	33	21	24	11.0 or 5.9	3	0	20	31.3

This we have produced in dogs by so clamping the inferior vena cava for two hours and a quarter as to hold the arterial pressure down to 40 mm. Hg. The effect on the death rate of injecting certain solutions in such animals was determined. It should be added that after removing the clamp the blood pressure rises; if the rise is maintained for two hours the untreated animal stands about a 50 per cent. chance of recovering, but if the blood pressure begins to

fall within two hours the animal invariably dies whether treated or not.

The table shows the solutions employed and the results obtained in those cases in which the pressure does not fall within two hours. A 6 per cent. solution of gum acacia in 2 per cent  $\text{NaHCO}_3$  is indifferent. So also is 25 per cent. gum acacia followed by 18 per cent. glucose. A 25 per cent. solution of gum acacia followed by a 5 per cent. solution of sodium bicarbonate does harm. Finally 25 per cent. gum acacia in 18 per cent. glucose saves about half of the animals that otherwise would die. There are theoretical reasons for the beneficial results obtained with the last named combination.

Hemorrhage is often a complicating circumstance of wound shock. Experiments have shown that the solution of 25 per cent. gum acacia in 18 per cent. glucose is not contraindicated by even extreme hemorrhage; indeed, it seems to accomplish some good in such cases.

The acacia-glucose mixture has been given intravenously to seven patients in wound shock or presenting some of the symptoms of shock. Four of these cases unquestionably were brought out of that condition, though three of the four died of other causes four to fifteen days subsequently. Three of the seven cases, all of them *in extremis* at the time the treatment was begun, responded, but only slightly, to the injection.

The solution, put up in hermetically sealed tubes, keeps indefinitely. It is aimed to give 5 c.c. of the solution per kilo of body weight and per hour. Owing to its high viscosity and the necessity for injecting the mixture slowly and at a uniform rate, special apparatus is required for its administration.

DISCUSSION

DR. SACHS: This work is of great value to surgeons generally because for years the problem of shock has occupied their attention. This method of treatment of Dr. Erlanger's will stimulate them to look for the early symptoms of shock and try to prevent it at its very inception. I would like to ask Dr. Erlanger how we might be able to distinguish the oncoming attack.

DR. BARNEY BROOKS: Why not administer the water along with the acacia?

DR. MARRIOTT: We have used Dr. Erlanger's glucose acacia solution in the treatment of infants suffering from the condition of dehydration following on cholera infantum. A number of the features of this disease closely resemble those of shock, particularly the concentration of the blood, the high non-protein nitrogen and the low blood pressure. The results from the clinical standpoint seem to warrant a more extensive trial.

DR. G. CANBY ROBINSON: This work brings out the relation of laboratory experimentation to clinical practice. When careful animal experimentation is carried on, it forms a basis for clinical procedure.

DR. ERLANGER, closing: The question asked by Dr. Sachs, I am sure, could be answered better by some clinician who has had a wider experience with shock than I have had. This opinion was forced on me by a recent disconcerting experience. I was called by Dr. Fischel to treat the case of compound comminuted fractures of the thigh and of the leg, with shock and low blood pressures. When I first saw the case the anesthesia and the operation were well under way.

The blood pressures were 140-90, that is, quite normal. On this account I decided not to treat the case despite Dr. Fischel's insistence that the patient was still in shock. Dr. Fischel basing his opinion on the fact that the patient did not bleed from the skin incisions. On discontinuing the anesthetic, the patient's pressure rapidly fell, and within a half hour he was pulseless. Injection of the acacia-glucose solution was started as rapidly as possible, and by it his circulation was decidedly improved. The patient nevertheless died eight hours subsequently.

There is no question but that this patient was in shock when I first saw him. His compensatory mechanisms, however, were combating the effect on the circulation so successfully that the blood pressures were useless as an index to the clinical condition. Obviously other criteria than the blood pressure must be found if we are to recognize shock in its early stages—in the stages in which treatment can exert its best effects.

With regard to the question asked by Dr. Brooks, the main reason for not administering the water along with the acacia is an empirical one: our statistics show that the administration of the isotonic solution is without effect on the death rate, whereas the hypertonic solution saves about half of the cases that otherwise would die. There are, of course, other reasons for giving the hypertonic solution. Such solutions increase the cardiac output and dilate the peripheral vessels through some specific action; this is exactly the response best calculated to overcome the condition we believe to be the cause of shock. And it is possible that the water that is drawn from the tissues into the circulation carries along with it constituents that lead to a rapid restoration of the blood to its normal composition.

## 2. MINERAL EQUILIBRIUM IN THE BLOOD PLASMA AND ITS RELATION TO CERTAIN CLINICAL CONDITIONS.—By Dr. W. McK. MARRIOTT.\*

The chief inorganic constituents of the blood plasma are the chlorids, phosphates and bicarbonates of sodium, calcium and magnesium. These probably exist in simple solution, and inasmuch as an "artificial blood" containing all these constituents may be prepared there is no reason for assuming the presence of hypothetical protein combinations in order to explain the solubility of the various constituents.

If slight changes in the concentration of some of the constituents of this artificial blood are made, the equilibrium is disturbed, and the concentration of other constituents is altered. For example, a slight increase in the amount of sodium bicarbonate or a diminution in the dissolved carbon dioxide or an increase in the concentration of the phosphate iron leads to a precipitation of part of the calcium.

In the body exactly similar changes occur when the amounts of the various organic constituents are altered. The variations in the inorganic constituents of the blood give rise to distinctive clinical symptoms. A good example is the effect of variations in the calcium of the blood. Normally calcium exists in human blood plasma in the concentration of 11 mgms. to 100 c.c. In infantile tetany (spasmophilia) the calcium of the plasma is invariably diminished and usually falls below 7 mgms. per 100 c.c. of plasma in patients having outspoken convulsions. The adminis-

tration of calcium chlorid, by mouth, to infants with tetany, leads to an increase in the calcium of the plasma and to a cessation of all of the clinical symptoms of tetany. The administration of phosphate to animals leads to a reduction of the calcium of the plasma and as a result the animals develop the symptoms of tetany (Binger).

In advanced nephritis there occurs an accumulation of inorganic phosphate in the plasma. This is regularly accompanied by a diminution of the calcium. As a result symptoms of tetany may occur. It is quite possible that the deficiency of calcium in the blood of certain uremic patients may be the cause of the hemorrhages that occur.

In rickets, the calcium of the plasma is not markedly diminished. Occasionally it is slightly lower than normal; but when this occurs it is usually possible to demonstrate the presence of latent tetany by means of the electrical reactions. It would seem that in rickets there is a failure of developing bones to assimilate the calcium which is present in sufficient amounts. The administration of calcium salts has no effect on the rachitic process. A decrease in the water content of the blood, such as occurs in severe diarrheal conditions, leads to a failure of the kidney to excrete acid phosphate. The accumulation of this in the blood causes a diminution of bicarbonate and a diminution of calcium, thus the whole equilibrium of the inorganic constituents is disturbed.

### DISCUSSION

DR. LEO LOEB: This is an interesting piece of work. It seems from Dr. Marriott's work that we have to distinguish etiologically between two conditions, namely, (1) the tetany which occurs after parathyroidectomy, and (2) the tetany which occurs in young children.

There is reason to assume that the first kind, namely, that after parathyroidectomy, is due to the action of guanidin, whereas, according to Dr. Marriott, the tetany in young children is not associated with this action of guanidin. It seems, therefore, that these two tetanies are etiologically quite distinct.

DR. BROOKS: The calcium salts are in different states in growing bone than in fully developed bone. This is proved by the fact that vital stains which have a particular affinity for calcium salts only stain growing bone.

DR. ROBINSON: Do you consider the manifestations of uremia are the results of disturbed mineral equilibrium in the blood?

DR. MARRIOTT, closing: In reply to Dr. Loeb, the tetany of parathyroidectomy seems to be associated with increased production of guanidin, and it has been shown experimentally that an injection of guanidin leads to a diminution of blood calcium. Thus, the tetany of infants and of parathyroidectomized animals both depend on low blood calcium although the underlying condition leading to the diminution of calcium may be different.

In answer to Dr. Robinson, I will say that at least part of the manifestations of uremia are due to disturbed mineral equilibrium in the blood. We have endeavored to lower the phosphate of the blood, and simultaneously increase the calcium by administration of calcium lactate to patients with uremia, and have been successful in one or two instances. There was a corresponding improvement in the clinical symptoms.

\* Most of the work reported in this paper was done with Dr. John Howland at the Johns Hopkins Hospital.



## Fifty-Fourth Meeting, Monday, Dec. 9, 1918

## SOME FACTORS CONTROLLING THE VOLUME-FLOW OF BLOOD.—By DR. ROBERT GESELL.

The experiments reported were performed on the submaxillary gland of the dog. In the study of electrical deflections associated with glandular activity it was noted that during prolonged chorda stimulation there occurred two large electrical deflections accompanied by synchronous fluctuations in secretion and volume-flow of blood. The explanation of these changes in rate of secretion and of volume-flow of blood appears to depend on which theory of volume-flow control we accept. If we accept the theory of nervous control the fluctuations in volume-flow may be looked on as primary, influencing the secretion. If we accept the theory of metabolite control the fluctuations in secretion may be looked upon as primary, producing the fluctuations in volume-flow. A variety of experiments were performed to determine which mechanism of volume-flow control is operative. As to the existence of vaso-dilator fibers in the chorda tympani nothing definite can be said. We have no proof that they do not exist, neither have we proof that metabolites cannot adequately control the volume-flow of blood under normal conditions. All that can be said is that if dilator nerves do control the extra flow of blood this flow may be augmented still more by an accumulation of metabolites.

Other factors controlling the volume-flow such as head of pressure, active constriction of central origin, passive constriction and viscosity were considered. The significance of these factors along with the effects of metabolites was discussed in connection with circulatory disturbances in man associated with hemorrhage and shock.

## DISCUSSION

DR. ERLANGER: Dr. Gesell has gone over this matter so thoroughly that I feel there is nothing to say. I think we are all impressed by the fact that there is really nothing left to discuss.

## THE INFLUENZA EPIDEMIC AT JEFFERSON BARRACKS, MO.—By LOUIS M. WARFIELD, Milwaukee, Wis., Major, M. C., U. S. A.

The epidemic of influenza began at the Barracks on September 28. For the previous two weeks a few cases had been seen which were recognized as probable influenza cases with unusual types of pneumonia. There were 8,935 men in camp. Of these 2,054 were in hospital up to November 12. There were 368 cases of pneumonia, 120 deaths, all from pneumonia. The mortality among all the men in camp was 1.3 per cent., that of all taken ill 5.8 per cent., and among the pneumonia cases 32.6 per cent.

All available barrack buildings, six new pavilion wards and three brick buildings housing three companies of men, were used. The greatest number under treatment in any one day was 1,251.

All men in the post were inspected twice daily. So far as possible men were made to sleep in cubicles formed by sheets hung between beds. All men in hospital were in cubicles. All attendants wore gauze masks. At first all large gatherings at the Y. M. C. A., K. C., and Post Hall Buildings were prohibited. Within two days these were reopened with a limited capacity. Strict quarantine was maintained between the men and the city of St. Louis.

The clinical course was similar to that frequently described of late. Pneumonias evolved in a similar manner. Leukocytes were low as a rule except where the infection was a complicating pneumococcus infection. The cause of death in most of our cases, we feel was toxemia. The heart held up in all but the few prolonged cases.

Complications were not many or serious except pneumonia. The great surprise was the few cases of sinus and mastoid infections. Even empyema occurred in only seven cases. These were toward the end of the epidemic. We lost no surgeons out of a personnel of 60. Only four were ill, none seriously. Among 166 nurses, 27 were ill, 12 had pneumonia. All recovered.

We feel sure that there were many more pneumonias than the number reported. Many small patches were unrecognized and actually unrecognizable by physical means. Roentgen ray revealed patches where physical examination failed to detect them. We feel that all cases with fever lasting more than five days and all cases with secondary sharp rise following a drop in twenty-four or forty-eight hours after admission had complicating pneumonia even if we could not detect signs in the lungs.

Prognosis was difficult and uncertain. We had no specific treatment. It was entirely symptomatic. Morphine, strychnine, caffeine, sodium-benzoate, adrenalin, pituitrin were used. Digitalis was used but little, whiskey not at all. Glucose and bicarbonate of soda by rectum seemed to help in the toxic cases. We gave water and alkalis freely and fed carbohydrate fat food stuffs. Our necropsy material was limited. Blood cultures were not very successful. From our small material we can only say that it does not appear that the *B. influenzae* (Pfeiffer) played any part in the epidemic.

## DISCUSSION

DR. DOCK: The hospital has been the seat of very active work in influenza cases, and some of the most important results of its study will be presented by Drs. Dean and Gilliland and Mr. Day. We have all enjoyed and profited by Major Warfield's remarks, and I know I express the sentiments of all when I say I regret that the Major did not speak more at length, not only in regard to his individual experience, but on the general subject. It may be worth while, under the circumstances, to make a few general remarks.

It must not be forgotten that influenza is a clinical term and was accepted in non-medical use before it became settled in medical literature. The same may be said of the synonym "grip." The names given to epidemics depend on circumstances which seem to furnish a satisfactory reason to those who start the fashion, and so one can understand why the present epidemic is spoken of as influenza, although similar epidemics, like the one a few years ago, were spoken of as grip. We cannot positively define any epidemic unless we know its etiology. Without this we are always talking with the possibility of error more or less extensive. Influenza is not at all peculiar in this respect. Speaking clinically, epidemics like the present influenza have long been known and well described. Each epidemic has presented certain peculiarities; sometimes one, sometimes another predominating quality will appear. This has been spoken of as the result of the genius epidemicus, which, of course, is merely another cover for ignorance. In the present epidemic the uncomplicated cases have resembled very much the mild cases in the epidemic of 1890 and after. These, as a rule, show the same symptoms of infection of the upper mucous membrane, especially the "pink eye," malaise and depression. Though severe throat and nose infections have not been numerous, they have been common enough, sometimes reaching a severe form of pansinusitis. I believe the pain, gastro-intestinal symptoms and nervous depression have not been as marked as in the previous epidemic, but often enough they were quite distinct.

It seems now that the present epidemic is remarkable for the number and severity of the bronchial

and pulmonary complications. These it may be remembered have been observed before. It is interesting to see that Osler in his first edition, 1892, written just after the height of the epidemic, described pneumonias as we find them today, and one can find excellent accounts in the early epidemics. Whether there is more, and more severe pneumonia can only be told as a result of more extensive statistics.

So far I cannot see that any addition has been made to the etiological knowledge of the epidemic. I think there is still a question of whether there is a specific germ. The work with Pfeiffer's bacillus has been very instructive. We have found it here in very few cases, and never in a way to make us think it was the most important organism. Many others have had the same experience, but it must be remembered that Pfeiffer's bacillus was not discovered in the active stage of the epidemic of thirty years ago, and was discovered by him in very limited material. Since then, I think it has been found chiefly by those who have devoted special time and attention to it, but even among such observers in the last twenty-five years, the germ has not been found common enough to convince one of its specificity. So it is not strange that many people suggest an undiscovered probably ultra-microscopic germ. It would be idle to deny that some such germ may be found. On the other hand, we should remember that in all cases of clinical influenza where secretions may be examined and in some cases in the blood the same sorts of germs are found that occur in certain common respiratory infections. Many of these respiratory infections themselves are so like influenza that they cannot be distinguished and it has been the custom for many years to speak of individual examples as cases of influenza or grip. I see nothing, therefore, to make it unlikely that influenza is due to certain very common organisms. Its seasonal peculiarities may be the result of modifications that we do not yet know how to explain, but which need not for that reason demand the acceptance of another unknown germ. Obviously, in every case we should work as carefully as possible toward the discovery of all germs involved, and learn as much as possible of their history as well as their relationships.

#### INFLUENZA CASES IN BARNES HOSPITAL.

—By DR. J. R. DEAN, M.D.

During the present epidemic of influenza, 65 cases of pneumonia complicating influenza were seen and treated in this hospital.

The history in the majority of cases was one of gradual onset two to six days prior to admission with prodromal symptoms of anorexia, headache, backache, sore throat, cough and pain in the chest. In 28 per cent. of cases cough was accompanied by bloody or pink tinged sputum, but in no case was there seen the typical rusty sputum one so often sees in lobar pneumonia. Sudden onset with chill and fever marked the beginning of the disease in only a few cases.

Cough, when productive, showed sputum variable in consistency and amount of blood.

Temperature varied between 101 F. and 105 F., and showed either a tendency to drop irregularly or remain elevated. In the greater majority of cases there was a leukopenia.

Urine was either negative or showed hyaline and finely granular casts. Blood pressure normal or slightly below.

Signs that were subsequently of much prognostic value were seen in those cases presenting on admission a marked cyanosis of lips and nail beds. Most of these proved fatal, but while it was always a bad sign, in some cases the cyanosis disappeared in a few days and the patients recovered.

Flushing of the face; moderate or intense injection of the conjunctivae and pharynx; dry, cracked lips, red, dry, cracked tongue were present in variable degree according to the severity of the case.

Physical signs in lungs varied from an impairment of resonance and diminution of vesicular breathing with showers of fine crepitant râles to frank signs of consolidation.

In those cases ending fatally, there was a marked edema of lungs.

Mortality was approximately 34 per cent.

#### PRELIMINARY STATISTICAL REPORT ON THE INFLUENZA CASES AT BARNES HOSPITAL.—By DR. T. S. BARNETT.

On October 1, the first case of influenza, a nurse, was admitted at this hospital. Since that time about 350 cases have been treated; however, since 50 cases are still under observation, and the records of a number of others have only recently become available, this report is preliminary and includes only 272 of the still incomplete series.

In the uncomplicated influenza cases the symptoms were rather varied. Most frequently the patient complained of headache, backache, pains in the limbs, pain behind the eyeballs, prostration, dryness of the throat and fever. On examination a conjunctivitis of varying severity and reddened pharynx were the only consistently present features. In 60 cases in which epistaxis was particularly enquired for, 48 per cent. at some time, usually early, had this symptom.

Two cases presented what may, perhaps be called the painful form of influenza. In both the temperature was remittent, reaching about 105 each day for six days and accompanied for the first three days by very severe muscle and joint pains with unusual prostration. One of these men did not void for the first twenty-four hours, his output was scanty for six days, but the urine negative. Subsequently the output became normal.

Concerning rashes, one case developed a severe erythematous eruption on the afternoon of the fourth day after admission. The following morning it was no longer present. This patient was not desquamating twenty-one days following the eruption and his urine was negative. A second case developed a severe, more lasting eruption accompanied by a rise in temperature, two weeks after admission, during convalescence from a bronchopneumonia. Twelve days following rash temperature had been normal for five days and he was not desquamating.

One case of cerebrospinal meningitis had been admitted from Washington University, the source of a number of our influenza cases. No further cases have developed. This patient recovered.

Of the 272 cases now to be more generally considered, 8 per cent. have had complications. The complications have been varied. Bronchopneumonia had been the most frequent with 37 cases. Thirteen per cent. of all cases developed bronchopneumonia. Of this number, 18 have died, a mortality of 6.6 per cent. of all cases.

Twenty-three cases have had bronchitis without signs at any time suggesting consolidation. That is, 8 per cent. of the total number of cases have had bronchitis without pneumonia, while 35 per cent. of the complications have been bronchitis. Other complications were acute fibrinous pleurisy in 7 instances; acute follicular tonsillitis in 5; pericarditis and urticaria occurred each in 2 cases. One had otitis media, one had ethmoid and sphenoid sinus infection. There were also 3 cases of acute laryngitis and one of an acute pharyngitis.

To return to those cases which were uncomplicated. First, the fever: The highest point reached at any



time averaged from 103 to 104 degrees. The day of disease on which the highest fever occurred was in 37 per cent. the second, in 28 per cent. the third and in 12 per cent. the fourth day. In short, the temperature reached its highest point in 77 per cent. of these cases from the second to the fourth day. The duration of fever in 197 uncomplicated cases was determined, considering fever to have been present at onset of symptoms and continuing until the temperature by rectum had fallen to 99.5 degrees or below. Of these 197 cases fever lasted for four days in 10 per cent.; five days in 13 per cent.; six days in 22 per cent.; seven days in 16 per cent., and eight days in 11 per cent. In short the duration of fever in 72 per cent. was from four to eight days. The most frequent duration was six days, while the average duration was 6.9 days, a week.

Urine examinations in eighty-three uncomplicated cases gave a positive test for albumen, usually a faint trace, in thirty-eight cases, 45 per cent. of those examined. Seven per cent. were found to contain a trace of sugar. Forty-eight per cent. were negative.

The white blood cell count in influenza has been spoken of as a leukopenia, from 160 counts done in uncomplicated cases of this series it would seem more exact to say that the white blood cells are diminished. The counts ranged from 2,000 in three cases to 14,000 in two cases. The most frequent count was 5,500 in twenty-two cases, 13 per cent. The average number of white blood cells found in these 160 cases was 6,200.

BACTERIOLOGICAL REPORT ON INFLUENZA CASES AT BARNES HOSPITAL.—By DR. A. B. DAY.

Fifty-nine throat cultures, 56 sputum cultures and 63 blood cultures were taken from cases of influenza or influenza complications.

The methods used were those advised for cultivation of the influenza bacillus; that is, using a blood agar medium with or without streaking the plate with staphylococcus or streptococcus hemolyticus. Incubation was continued for from four to six days with daily examination. Ten per cent. carbol fuchsin

BLOOD CULTURES						
Cases	Cultures Made	Cases Influenza		Cases Bronchopneumonia (39) and Empyema (2)		
51	63	10		41		
		Positive	Negative	Positive	Negative	
		0	10	10	31	
			100 %	24.4 %	75.6 %	
Positive Cultures						
	Pneumococcus Type II.....				1	
	Pneumococcus Type III.....				2	
	Pneumococcus Group IV.....				1	
	Streptococcus hemolyticus.....				2	
	Undetermined.....				4	
	Total.....				10	
Cultures		Pneumo-coccus	Mie. Catarrhalis	B. Infu- enzae ?	Staphylo- coccus	Strepto- coccus
Throat 59.....	43	38	6	39	30	
	74%	62%	10%	10%	49%	
Sputum 56.....	38	22	10	27	14	
	67.8%	39.3%	17.9%	48%	25%	

and Gram stains were used. The table shows the various organisms noted. Differentiation was based on the morphological characteristics and staining reaction. No systematic attempts were made to isolate the various organisms found, except the influenza bacillus, which, however, was not obtained in pure culture in any case.

Sputums were collected in sterile Petri dishes, the mouth was washed, and the sputum washed in the three changes of normal saline.

Blood cultures were made in glucose broth and two glucose agar plates were poured from each case. Positive cultures were typed according to the methods advised by the Rockefeller workers.

All cases giving positive blood cultures died.

All positive blood cultures were taken from pneumonia cases in the terminal stage of the disease.

Four empyema fluids were cultured. Two contained pure culture of streptococcus hemolyticus, one staphylococcus aureus, one was sterile.

ROENTGEN-RAY PLATES FROM COMPLICATED INFLUENZA CASES.—By DR. G. E. GILLILAND.

Only a few plates showing some particular views of cases in the influenza epidemic can be shown at this time. As had been mentioned, pneumonia manifests itself to physical examination in the region of the angle of the right scapula first. Here a consolidation can be made out in a vast majority of cases before it can be found elsewhere.

The first two roentgen-ray plates show this particular feature very clearly. There is an area here at the angle of the right scapula which does not extend to the base on that side, but there is an intervening space which appears fairly normal between this dense area and the lower lung border. There is also a clear intervening area between the dense area and the spine; this is shown very clearly in these two plates.

The next plate is one from a patient who showed a very unusual dyspnea. This dyspnea was quite marked and the general appearance of the patient suggested he might have an obstruction in the larynx. Laryngeal examination showed an acute congestion, but nothing approaching obstruction. No physical signs of consolidation were made out in the chest. Further laryngeal examination suggested that the patient had severe bronchitis. The roentgen-ray plate shows some increased density in the apices of both lungs, but this is probably because the plate is thin. Both bases of the lungs are clear, and no evidence of pulmonary consolidation can be made out at any point. This plate also shows marked increase in extent and density of the hilus shadows.

Next two plates are shown to illustrate the increase in density of the hilus shadows and the increase in extent of these shadows. Practically all of the plates we have made of these cases show this marked increase in the size of the hilus densities. At autopsy we are finding the hilus glands to be markedly enlarged and turgid. These glands on microscopical section show marked edema and marked round cell infiltration. These dense areas might be confused and thought to be pneumonic areas at the roots of the lungs.

The next three plates show the course of a case of influenza complicated by a right-sided empyema. In the first plate the dense area is of small extent at the base of the right side, whereas the left side is fairly clear. The next plate shows an increase in the area of density on the right base, the area now occupying almost half of the right side. The left side is still clear. The third plate which was taken because of tubular breathing on the left side of the chest posteriorly and a pneumonia was somewhat suspected. It shows the left side still clear and nothing to suggest a pneumonia; the right side is practically the same as the condition shown by the preceding plate.

INFLUENZA CASES IN THE ST. LOUIS CHILDREN'S HOSPITAL.—By DR. W. McK. MARRIOTT.

In the past month, seventy children with influenza have been admitted to the St. Louis Children's Hos-

pital. The symptoms were not essentially different from those of adult patients with the same disease. The most striking symptoms of the onset were sore throat and a croupy cough. Rhino-pharyngitis was relatively infrequent. The majority of the patients showed no physical signs. There was, as a rule, no leukocytosis.

In seventeen patients the disease was complicated by bronchopneumonia. Fourteen of these had pneumonia on admission; three developed it during their stay in the hospital. Unusual features of the pneumonia were the appearance of severe acidosis in two patients, both from one family. These patients were intensely cyanotic and in a moribund condition on admission to the hospital. The acidosis was probably the result of suboxidation due to respiratory failure.

Two patients developed extensive purpura accompanied by hemorrhages from the mucous membranes;

dren's hospitals have come to necropsy. All of these cases have shown an extensive bronchopneumonia, involving both lower lobes and the lower parts of the upper and middle lobes of the right and the lower part of the upper lobe of the left lung. Such a distribution of the pneumonia we have noted as typical in the accompanying table. This pneumonia in most cases was characterized by congestion, hemorrhage, edema and an exudate poor in polymorphonuclear leukocytes. The bacteria found in the different cases has been variable. We have used no elaborate method for the isolation of any one organism. The media used have been plain agar and blood agar. The results of the bacteriological study is given in the table. In a large number of the cases the bronchi, especially the smaller bronchi, showed an intense inflammation, purulent in character, and often accompanied with dilatation of the tubes, bronchiectasis and abscess formation.

BARNES HOSPITAL

Number	Name	Bacteria			Congestion	Hemorrhage	Edema	Lungs, Pathology			Distribution	Remarks	Spleen	Liver	Other Organs
		Heart's Blood	Lungs	Other Organs				Purulent Bronchitis	Abscess	Pleurisy					
1140	J. C.	Pneumococcus III	Same	.....	+	+	+	+	0	Chronic acute	Typical	Tuberculosis complicating	Large	Fat	Multiple hemorrhages, cloudy swelling, pericarditis
1141	B. E. L.	Sterile	Hemolytic strept.	.....	+	+	+	+	+	Chronic	Typical	.....	Large	Fat	Not examined
1145	W. McC.	Pneumococcus IV	Same	.....	+	+	+	+	0	0	Typical	.....	Large	Fat	Hemorrhage in adrenal, cloudy swelling
1146	O. B.	Sterile	Influenza B.	Sterile	+	+	+	0	0	Chronic	Typical	Chronic pneumonia	Mil. tub. Large	Mil. tub. Fat	Miliary tuberculosis
1151	J. K. J.	Hemolytic strept.	Same	Same	+	+	+	Sl.	0	0	Typical	.....	Large	Fat	Cloudy swelling, congestion
1158	M. McC.	Pneumococcus	Same	.....	+	+	+	+	0	Chronic	Typical	.....	Large	Fat	Cloudy swelling, congestion
1168	T. G.	.....	Pneumococcus	.....	+	+	+	+	+	Acute	Typical	Pseudolobar pneumonia	Large	....	Cloudy swelling, congestion
1159	F. S.	.....	Pneumococcus, B. influenza	.....	+	+	+	+	+	St. Louis Children's Hospital	Typical	.....	Large	Fat	Cloudy swelling
1166	V. P.	Pneumococcus III, staphy.	Same	.....	+	+	+	+	Lg.	Acute	Typical	.....	Large	....	Cloudy swelling

\* Bronchiectasis.

both recovered. One patient developed an extensive subcutaneous emphysema secondary to mediastinal emphysema.

The prognosis of influenza in children would seem, from our experience, to be somewhat better than in adults.

The treatment pursued was strict isolation of each patient even from other influenza patients. Water was given in large amounts by mouth, and in some instances subcutaneously. Patients with prolonged bronchopneumonia were given digitalis. Otherwise the treatment was entirely symptomatic.

**PATHOLOGICAL STUDY OF CASES OF INFLUENZA DYING IN THE BARNES HOSPITAL AND THE ST. LOUIS CHILDREN'S HOSPITAL.**—By DR. M. T. BURROWS, DR. HANS P. ANDERSEN and MR. A. GOLDMAN.

During the last few months a number of the cases of influenza dying in the Barnes and St. Louis Chil-

In one case an acute tuberculosis was superimposed (Case 1140 of the table). This originated apparently in a focal encapsulated caseous lesion in the lower right lobe.

One case was peculiar. Both lower lobes and the lower parts of the upper lobes were edematous, congested and hemorrhagic. Both lungs contain several small fibrous or well encapsulated dry caseous lesions. Fibrous nodules were found in the peribronchial lymph glands. The liver, spleen and the peribronchial, retroperitoneal and mesenteric lymph glands were the site of an extensive miliary tuberculosis. A few miliary tubercles were scattered through both lungs. There was an extensive organizing fibrous pleurisy on the right side and focal areas of organizing fibrous pericarditis and peritonitis (over diaphragm, right side).

Microscopically, the lungs showed alveoli containing a small amount of fibrin, granular material, red cells and large and small mononuclear cells. In places the walls of the alveoli were thickened and infiltrated with the same mononuclear cells. The



pneumonia was chronic in type. A pure culture of influenza bacilli was obtained from the lung in this case (Case 1146 of the table).

Pleurisy was seen in a limited number of all the cases. Also focal areas of acute pericarditis were noted. The spleen was much enlarged in a few of the cases. All showed cloudy swelling of the viscera and a large part of the cases showed fat in the liver cells. Instances of hemorrhages in other organs than the lung are noted in the table.

#### DISCUSSION

MAJOR WARFIELD: I was very much interested in what Dr. Dock was saying in regard to the question of the etiology of influenza. I feel with him that the etiology of influenza is not known.

As to the question of reoccurrence, I don't know how many cases are reinfected, but as far as I know we have had only one case return to the Barracks. We tried to keep the men in hospital until they had completely recovered, but one man was discharged too soon. He came back in five or six days with pneumonia and died. It is impossible to say just how many have reinfections.

To make a long story short and a long argument brief, I will make the following statement which I will qualify later. I think influenza is an infectious disease of unknown etiology which conveys an absolutely lasting immunity. My reason for saying this is that in 1889 we had a large number of cases of this disease. In recent years there have been many infections which were called grip. These are due to pneumococci, influenza bacilli; some may be staphylococci, streptococci, micrococcus catarrhalis and some may be, heaven knows what. These respiratory diseases are contagious, go from house to house, from person to person. These cases are not the same disease although they may have similar symptoms. Influenza has not been prevalent in this country since 1889. That was thirty years ago. In that thirty years a new population has been born. That epidemic (1889-1892) attacked practically the whole population; now those around thirty years of age are mostly attacked at present, and the children are the victims. I was not a doctor in 1889 so that I don't remember personally about those cases, but the type of cases was different from what it is now. The epidemic in 1889 had many more cases of the gastro-intestinal type and the cerebrospinal type, much more so than in this epidemic, which is more of the respiratory type. This epidemic is working on absolutely virgin soil. This is the history of epidemics of measles and all infectious diseases, the etiology of which we do not know. Influenza is a disease the etiology of which we do not know; nevertheless it is a disease of certain definite characteristics complicated by pneumonia which causes death. I do not believe that uncomplicated influenza is ever fatal.

Just one thing more. I did not say many things I might have said because I thought the discussions would bring them out. The cases we had are just as you found them in the hospital here. The clinical features are the same, the pathology is exactly the same as we found. I did not speak of one point about the lungs. In some cases, there was the most curious solidification of the lungs that I have ever seen. It looked like a chronic old pneumonia in which there was a considerable lot of edema and pus cells.

Just a word about the treatment. I feel that our success, and we think we did have success, when we compare our mortality statistics with those of other camps—we are anywhere from 50 per cent. to 100 per cent. better—our success was due to the splendid cooperation between the line officers and the medical department. We were always a number of hospital beds ahead of the admissions so that as soon as a man got sick, we could put him directly in bed. I

neglected to say that we inspected the companies twice a day, so that from the first signs, the men were put into the hospital and to bed. Of course, one can do that in the army. You can order a man to the hospital and that settles it. The cases that died twenty-four to forty hours after entrance were cases that had been ill for four or five days outside, and came in with pneumonia. Those cases all did badly and most of them died. We put them all outside on porches as far as possible and we filled them with water. We gave them food. We do not believe in feeding anybody who is sick on a liquid diet, as anybody who is starved to death has a pretty hard time. We do not think that is rational, so we gave them a considerable amount of diet. We did not give them much digitalin, but gave them  $\frac{1}{15}$  grain strychnin. We found their condition was much improved after large doses of strychnin. We think we had quite a good deal of success, not so much with saline, but with glucose and sodium bicarbonate proctoclyses. That helped tremendously.

Personally, I took care of the nurses. We had twenty-seven nurses. Twelve had pneumonia and six were desperately ill. I was sure that I would lose at least one, but they all recovered. We treated them all that way.

There was one other thing that helped and that is morphin. If I am sick and I am coughing, and my attending physician does not give me morphin, I have my opinion of him. I would change doctors. That is the way I personally feel, so that when these men would cough—unproductive coughs—they did not cough up sputum, just terrific hacking and distressing cough—we would give them morphin. We kept the pneumonia cases under morphin. We did not use digitalin to any great extent. There are other points I would like to discuss, but on account of the lateness of the hour I must close. Influenza is a name that will probably stay with us for the rest of our lives, and our children's and grandchildren's, and will probably become a wastebasket name like malaria or rheumatism where are thrown many of the mistakes in diagnosis.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at the Public Library, Wednesday evening, February 5. Just sufficient members for a quorum were present and the president, Dr. A. B. McGlothlan, presided. The minutes of the previous meeting were read and approved.

The following applications for membership received their first reading and were referred to the board of censors for investigation and report: Drs. J. D. Kearby, Carl Fred Kloeppel, Joseph Standley, Walter Joseph Hansen.

The secretary was instructed by unanimous vote to investigate and if possible secure the Commerce Club rooms for our future meetings.

There being no further business for the society, the meeting adjourned.

#### Meeting of February 19

The regular meeting of the Buchanan County Medical Society was held at the Public Library, Wednesday evening, February 19, the president, Dr. A. B. McGlothlan, in the chair. Sixteen members were present. The minutes of the previous meeting were read and approved.

The following applications for membership having received their second reading and duly investigated and indorsed by the board of censors, were balloted on and unanimously elected to membership: Dr. H. D. Kearby, Fred Kloeppel, Joseph Standley and Walter Joseph Hansen.

The executive committee was requested to submit

the resolutions regarding elimination of the by-laws from the articles of incorporation, to the society for their action.

Dr. Woodson reported that there was no immediate danger of a workmen's compensation law being passed at the present session of our state legislature.

The communication from the state board of health requesting the indorsement of our Society to a proposed change in the law governing the legal control of health matters in the state of Missouri was referred to the public health and legislation committee with power to act.

The application of Dr. Virgil Randall Wilson received its first reading and was referred to the board of censors for their investigation and report.

A delightfully interesting paper by Dr. A. L. Gray, subject, "Hemorrhages of Pregnancy," was read, and discussed by the following members: Drs. Stevenson, Stamey, Willman and Woodson. The discussion was closed by Dr. Gray.

W. F. GOETZE, M.D., Secretary.

#### CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met at the Snapp Hotel in Excelsior Springs, Monday evening, February 24, with an excellent attendance.

This being our first meeting in 1919, it was devoted to both business and pleasure. The president, Dr. Musgrave, appointed a committee on arrangements for the coming state association meeting: Drs. J. E. Baird, chairman; H. J. Clark and E. C. Robichaux. Many paid their dues, and paid them as if it were a pleasure and a good investment. The Clay County Medical Society is not a "dead one." Our society is paying the dues of all men overseas, and at this meeting decided to pay dues of those who may be unpaid on May 25, by reason of protracted service in army cantonments.

Dr. J. A. Hodam of Excelsior Springs makes application for membership. It was submitted to the censors, none of whom were available at this meeting.

As a feature of the evening, Dr. J. L. Myers of Kansas City, gave a travelogue lecture on Alaska, supplemented by many beautiful stereopticon views, made by the doctor himself while a resident of that country. This was the most instructive thing of its class that I have ever seen in a society meeting. Many of our members' wives were present and enjoyed it to the fullest extent. Dr. Myers gave two of the poems by the soldier-poet, Robert W. Service, who has immortalized the Land of the Midnight Sun.

As the evening was very stormy, many guests of the Snapp Hotel sat in with us and joined in the applause. A vote of thanks was unanimous to Dr. Myers and his able assistant. May we have many more such meetings. Next meeting in April, at the Major Hotel in Liberty.

J. J. GAINES, M.D., Secretary.

#### GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society met in the Town Hall of Meta, Mo., in the afternoon of Jan. 30, 1919. The president, Dr. J. O. Cooper of Linn, presided. The following were present and participated in the meeting: Drs. J. O. Cooper, Linn; J. J. Radmacher, Argyle; Isenberg and Gregory, Meta; Werner, St. Thomas, and John D. Seba, Bland. After the minutes of the previous meeting were read and approved, Dr. J. O. Cooper of Linn introduced the following resolution:

WHEREAS, The need of revenue for the Missouri State Board of Health is highly necessary for it to carry on the work of public health and sanitation, therefore be it

*Resolved*, That the Gasconade-Maries-Osage County Medical Society of the Missouri State Medical Association place itself on record as favoring the enactment of some revenue measure making it possible for the Missouri State Board of Health to extend its work of usefulness by enlarging its laboratories to such an extent that they will be at all times prepared to make free examination of blood, sputum, and pathologic specimens of the human body, so that Missouri doctors may at all times give better service to the general public; be it further

*Resolved*, That we are opposed to the enactment of any law that lowers the standard of the medical profession, by admitting the so-called chiropractors, optometrists, and chiropodists to recognition as practitioners or giving them the legal right to treat the human body for ailments or diseases by the so-called adjustment of the spinal column, or the fitting of eyeglasses. The various bills now before the legislature will, if passed, give them the right to parade before the public as nerve specialists, eyesight specialists, and feet specialists, thus deceiving the public and making them believe that along these lines these men possess even more knowledge than the average licensed practitioners of medicine; be it further

*Resolved*, That the secretary be instructed to convey these resolutions to our senator, Hon. J. L. A. Gardner, and representatives, Hon. August Meyer, Hon. G. Plassmeyer, and Hon. F. M. Carrington, and ask them to use their influence along the lines indicated in these resolutions.

Dr. H. G. Isenberg then presented several clinics and after their disposal Dr. C. H. Neilson of St. Louis delivered a lecture on influenza. This lecture and discussion took up all the afternoon.

The following officers were elected for the year of 1919: President, J. J. Radmacher, Argyle; vice president, J. F. Jett, Linn; secretary and treasurer, John D. Seba, Bland. The next meeting will be in Linn, Mo., on April 24, 1919.

At the night session Dr. J. J. Radmacher presided. The first speaker was Dr. John D. Seba, who spoke on the necessity of medical legislation and the necessity of the enforcement of laws to protect the public health. Dr. C. H. Neilson spoke on the necessity of sanitation and the evil results that followed neglect of sanitary measures. Dr. Neilson spoke for more than an hour and everything he said was highly appreciated by the audience. At the conclusion of his public health lecture the audience thanked him by a rising vote.

JOHN D. SEBA, M. D., Secretary.

#### HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met on Wednesday, Jan. 15, 1919. Those present were Drs. A. J. McNees, E. C. Peelor, S. A. Poague, R. B. Fewel, S. W. Woltzen, president, and F. M. Douglass. The minutes of the last meeting were read and approved.

Dr. E. C. Peelor told us of his experience while in the Medical Reserve Corps, he having been sent to a town in Nebraska to care for the populace stricken with influenza. Everything was furnished and but little medicine was given, except eliminants and some morphia to control pain. Though whole families had it, there were very few deaths.

From there, as soon as the worst was over, he was sent to the National Soldiers Home at Leavenworth, and there the younger men, Spanish-American soldiers, were the only ones that had it; old Civil War men were immune.

At the secretary's request, Dr. E. C. Peelor was elected assistant secretary.

F. M. DOUGLASS, M.D.,  
Secretary-Reporter.



**HOWARD COUNTY MEDICAL SOCIETY**

The Howard County Medical Society met with Dr. C. H. Lee, Fayette, at 2 p. m., February 7. Those present were Drs. T. C. Richards, C. H. Lee, W. R. Hawkins, V. Q. Bonham and C. W. Watts. The minutes of the last meeting were read and approved. Dr. W. R. Hawkins presided.

There being no clinics or papers presented, the following officers were elected for 1919: President, Dr. James R. Champion, Hillsdale; first vice-president, Dr. Thos. J. Payne, Fayette; second vice-president, Dr. Elbert King, New Franklin; secretary and treasurer, Dr. Chas. W. Watts, Fayette; delegate to the Missouri State Medical Association, Dr. Chas. H. Lee, Fayette; alternate, Dr. V. Q. Bonham, Fayette. On account of the death of Dr. N. E. Smith, Fayette, Dr. Thos. C. Richards was elected chairman of the board of censors.

We were glad to welcome back our president, Dr. W. R. Hawkins, and Dr. T. C. Richards. Dr. Chas. W. Watts was re-elected by acclamation, it being the twenty-first anniversary of his secretaryship of the Howard County Medical Society.

The Society adjourned at 3 p. m. on account of so much illness prevailing in the city and county, and will next meet on the first Friday in March.

C. W. WATTS, M.D., Secretary.

**MARION COUNTY MEDICAL SOCIETY**

At the meeting of the Marion County Medical Society held February 7, 1919, Drs. Shanks, Banks and Hill were appointed to attend the returned tuberculous soldiers in response to a request of the Association for Relief and Control of Tuberculosis in Missouri. All the physicians who attended the meeting paid their dues.

MARY S. ROSS, M.D., Secretary.

**PETTIS COUNTY MEDICAL SOCIETY**

At the regular meeting of the Pettis County Medical Society, held at Sedalia on February 17, the following officers were elected: Dr. W. M. Wheeler, president; Dr. M. T. Collins, vice president; Dr. J. G. Love, secretary; Dr. A. E. Monroe, treasurer; Dr. M. P. Shy, delegate to the State Society; Dr. M. T. Collins, alternate.

All those attending paid their dues. We hope to have the dues of the other members within a very short time. Our society has been considerably torn up by many of our members being in government service and at present very few of them have returned.

J. G. LOVE, M.D., Secretary.

**REYNOLDS COUNTY MEDICAL SOCIETY**

The Reynolds County Medical Society met at Corridon, Jan. 3, 1919. After transacting the usual routine business, the society proceeded to elect officers for 1919 as follows: Drs. J. R. Pyrtle, Centerville, was chosen president; A. F. Bugg, Corridon, secretary-treasurer.

The society called on Dr. T. W. Chilton for a discussion and treatment of influenza. The doctor favored the society with an interesting talk on this very vital topic of the day. The members generally participated in the discussion following the doctor's remarks and the members felt much good had resulted from interchanging of opinions on this most important subject.

The society voted to have the next meeting at Centerville. There being no further business the society adjourned.

A. F. BUGG, M.D., Secretary.

**SCHUYLER COUNTY MEDICAL SOCIETY**

At a regular meeting of the Schuyler County Medical Society held at Lancaster on Jan. 20, 1919, there were present Drs. B. B. Potter, W. F. Justice, J. H. Keller, A. J. Drake, H. E. Gerwig and J. B. Bridges. The meeting was called to order by President Potter at 2 p. m., and the following business was transacted:

The minutes of the last meeting were read and approved. The secretary-treasurer made the annual financial report of the society and showed a balance of \$11.65 in the treasury and same was accepted by the society.

A communication from the secretary of the State Medical Association was read calling attention to the effort being made by the optometrists, chiropractics and chiropodists to get their measures passed, and a resolution was adopted condemning their efforts and instructing our secretary to write our representative and senator and insist on them voting against these and all other measures of a like character and to support the bill known as the State Board of Health Bill.

There were no papers read but many subjects were discussed. The election of officers resulted in the following: President, Dr. B. B. Potter; vice president, Dr. A. J. Drake; secretary-treasurer, Dr. J. B. Bridges; delegate to state meeting, Dr. J. H. Keller; alternate, Dr. H. E. Gerwig.

The name of Dr. O. P. Farrington of Greentop was presented to the society by Dr. J. H. Keller; the board of censors voted favorably and Dr. O. P. Farrington was elected to membership.

The next meeting will be held at Lancaster, April 16. Papers will be read by Drs. W. H. Zieber, J. H. Keller and A. J. Drake.

J. B. BRIDGES, M.D., Secretary.

**SCOTT COUNTY MEDICAL SOCIETY**

The Scott County Medical Society met in Oran, Tuesday, January 21, at the Majestic Theater, with five members present, viz.: Drs. Milem, Wescoat, Rodenmeyer, Nienstedt and Cline. The meeting was opened by the president, Dr. Milem, and the minutes of the last meeting were read and approved.

Officers for the year were elected as follows: President, J. A. Milem, Sikeston; vice president, G. A. Sample, Chaffee; secretary-treasurer, E. J. Nienstedt, Blodgett; delegate, T. R. Frazier, Commerce; alternate, G. S. Cannon, Farnelt.

The application of E. L. Fredericks of Vanduser was voted on and accepted, thus placing his membership with the society.

Those on program for papers to be read were absent so after a general discussion on influenza by all present the meeting adjourned to meet in Benton the second Tuesday in April, 1919.

E. J. NIENSTEDT, M.D., Secretary.

**ST. LOUIS COUNTY MEDICAL SOCIETY**

The St. Louis County Medical Society met at the City Hall in Webster Groves on Feb. 12, 1919. The Society was called to order at 3 p. m. by President Miles. The minutes of the previous meeting were read and approved.

The application of Dr. B. G. Benson for membership by transfer card from the St. Louis Medical Society was acted upon and he was received into membership.

Letters from Drs. Waldo Will, J. H. Armstrong and Howard Carter relative to their intentions as to resuming their practices at their old locations after their discharge from the Army were read.

There being no literary program, clinical cases were presented by several members and discussed.

The question of changing the time of meeting from afternoon to evening was brought up, but on account of the small number of members present, full discussion was postponed until the next meeting, and the secretary was instructed to notify members that the subject of such change would be brought up for action at the next meeting.

ARTHUR CONWAY, M.D., Secretary.

### WAYNE COUNTY MEDICAL SOCIETY

At the meeting of the Wayne County Medical Society held at Williamsville, February 6, the public health committee submitted the following resolution:

In view of the fact that the good health of the people is our country's strength, and in view of the fact that the health of our people is entirely dependent upon the medical profession and our medical laws, and in view of the fact that our present medical laws are deficient and useless in the protection of the health of our people, therefore be it

*Resolved*, That the Wayne County Medical Society in convention assembled at Williamsville, Mo., on the 6th day of February, 1919, is opposed to the chiropractic bill, the optometry bill and the chiropody bill; second, be it

*Resolved*, That we are in favor of the reorganized state board of health with its increased power to enforce control of all communicable diseases.

J. J. RINEHART,

J. P. SEBASTIAN,

J. F. WAGNER,  
Committee.

Some interesting discussion on various topics was indulged in by the members. Adjournment was made to meet again at Williamsville, Tuesday, March 4, 1919.

R. J. OWENS, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1918, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**CHLORAMINE-T, MONSANTO.**—A brand of chloramine-T which complies with the New and Nonofficial Remedies standards. The properties, actions, uses and dosage are described in New and Nonofficial Remedies, 1918, p. 156. Monsanto Chemical Works, St. Louis, Mo.

**CHLORINATED EUCALYPTOL, SQUIBB.**—Eucalyptol chlorinated at room temperature. It is used as a solvent for dichloramine-T in the treatment of infected wounds, etc. The solution should preferably be made as required. E. R. Squibb & Sons, New York.

**ARSAMINOL.**—A brand of arsphenamine which complies with the New and Nonofficial Remedies standards. Arsaminol is supplied in sealed tubes containing, respectively, 0.1 Gm., 0.2 Gm., 0.3 Gm., 0.4 Gm., 0.5 Gm., and 0.6 Gm. Takamine Laboratory, Inc., New York (*Jour. A. M. A.*, Jan. 18, 1919, p. 193).

**DIGITAN.**—A digitalis preparation said to contain digitoxin and digitalin in the form of tannates. It is standardized biologically. Digitan was first introduced as digipuratum and is made under the digipuratum patent by license of the U. S. Federal Trade Commission. The actions, uses and dosage of digitan is the same as those of digitalis. It is sold in the form of a powder and as digitan tablets 1½ grains. Merck and Co., New York.

**NEOARSENOBENZOL (DERMATOLOGICAL RESEARCH LABORATORIES).**—A brand of neoarsphenamine complying with the New and Nonofficial Remedies standards. It is marketed in tubes containing, respectively, 0.1 Gm., 0.3 Gm., 0.45 Gm., 0.6 Gm., 0.75 Gm., and 0.9 Gm. Dermatological Research Laboratories, Philadelphia Polyclinic, Philadelphia (*Jour. A. M. A.*, Jan. 25, 1919, p. 275).

### PROPAGANDA FOR REFORM

**MISBRANDED NOSTRUMS.**—The following "patent medicines" have been the subject of prosecution under the Federal Food and Drugs Act: Paine's Celery Compound; Botanic Blood Balm; Owens' Wonderful Sore Wash; Lafayette Cough Syrup; Gilbert's Gravel Root Compound; Strange's Rheumatic Remedy; Baur's Diamond Brand Bromides; S. B. Cough and Consumption Remedy; Gowan's Preparation; Urol; Boxenbaum Discovery; Tablets Creavita; Old Lady Fulten's Comforting Pills; C. C. C. (Cornwall Elastic Capsules); Victor Injection, No. 19 Compound and No. 6 Compound; Hemogenas Pills; Restorative Tablets-Fountain of Health; Denn's Strong, Sure, Safe and Speedy Stomach, Liver, Kidney, and Rheumatism Remedy; Dr. Navaun's Mexican Lung Balm; Dr. Navaun's Kidney Tablets; Dr. Chas. DeGrath's Electric Oil; Bovinine; Fritch's Vegetable Liniment; Perkin's National Herbs Blood Purifier, Kidney and Liver Regulator; Dr. Lemke's Golden Electric Liniment; Dr. Lemke's St. Johannis Drops; Mentholum; Enteronol; Dr. Harter's Lung Balm; Dr. O. Phelps Brown's Herbal Ointment; Taylor's Horehound Balsam; Breeden's Rheumatic Cure; Sulphur Bitters; Dr. DeWitt's Eclectic Cure; Dr. DeWitt's Liver, Blood and Kidney Remedy; Payne's Sylax; Dr. Bell's Pine Tar Honey, and Lung Germine (*Jour. A. M. A.*, Jan. 4, 1919, p. 59).

**"ASPIRIN" A COMMON NAME.**—The claim of the Bayer Company to the exclusive right of applying the name "aspirin" to acetylsalicylic acid will be definitely set aside if the recommendation of the examiner of interferences of the United States patent office is upheld. The stand taken by the patent office is in line with the established principle that no one can have a monopoly in the name of anything. Since "aspirin" has become the common name for acetylsalicylic acid, no one firm can have an exclusive right to it (*Jour. A. M. A.*, Jan. 11, 1919, p. 119).

**THE QUALITY OF THE MARKET SUPPLY OF PROCAINE.**—The local anesthetic procaine (first introduced as novocaine by the Farbwerke vorm. Meister, Lucius and Bruening, Hoechst a. M. Germany) is now manufactured by the Abbott Laboratories, the H. A. Metz Laboratories and the Rector Chemical Company. The products of these three firms were accepted for New and Nonofficial Remedies after the A. M. A. Chemical Laboratory had reported specimens chemically satisfactory and the Cornell Pharmacologic Laboratory had determined that they were not unduly toxic. In accordance with its announcement to report from time to time on the quality of American made synthetics, the Council on Pharmacy and Chemistry now publishes a report on the quality of the procaine now supplied to physicians. The examination demonstrates that the three brands were of a satisfactory quality. Some of the specimens of procaine-Abbott and procaine-Rector had a yellow or light brown tinge (a specimen of procaine-Metz "novocaine" recently sent the Council also had a slight yellow tinge), but so far as the evidence goes there is nothing to indicate that the discolored specimens are seriously impure. The Council considers the use of the discolored product justified in the present emergency, but urges that for the future a colorless preparation be supplied (*Jour. A. M. A.*, Jan. 11, 1919, p. 136).



**PLURIGLANDULAR MIXTURES.**—The Council on Pharmacy and Chemistry reports that the following preparations put out by Henry R. Harrower have been found ineligible for New and Nonofficial Remedies: Caps. Adreno-Spermin Comp.; Caps. Antero-Pituitary Comp.; Caps. Placento-Mammary Comp.; Caps. Thyro-Ovarian Comp.; Caps. Hepato-Splenic Comp.; Caps. Pancreas Comp., and Caps. Thyroid Comp. Each of the mixtures contained one ingredient or more which is neither recognized in the U. S. Pharmacopoeia nor admitted to New and Nonofficial Remedies. For obvious reasons the Council does not accept a mixture containing an indefinite ingredient; hence, it would be necessary as a preliminary for the consideration of any one of the mixtures that their unofficial ingredients be made eligible for New and Nonofficial Remedies, by the submission of evidence that such ingredient is of uniform composition and that it is therapeutically valuable when given by mouth. The mixtures were also ineligible because in the light of our knowledge the administration of gland mixtures in the host of conditions enumerated in the advertising circular of Harrower is irrational and on a par with the use of shotgun mixtures once in vogue (*Jour. A. M. A.*, Jan. 18, 1919, p. 213).

**UNSUCCESSFUL ATTEMPTS TO TRANSMIT INFLUENZA EXPERIMENTALLY.**—Two extensive attempts have been made under the auspices of the U. S. Public Health Service and the U. S. Navy to transmit influenza experimentally. Inoculations were made of pure cultures of influenza bacillus, of secretions of the upper air passages in the early stages of influenza, and of blood from typical cases of influenza, and other methods of transmitting the disease were tried. In no case was influenza developed (*Jour. A. M. A.*, Jan. 25, 1919, p. 281).

**EVIDENCE.**—The Cutter Laboratory advertises that a physician has used between 700 and 800 doses of its Mixed Vaccine-Respiratory Infections as a prophylactic without a single failure to "protect" against disease. The Cutter Laboratory thinks this is evidence which is convincing enough to satisfy even the most conservative. . . . If a physician were to report that 643 of his patients who had used salt instead of sugar in their coffee had remained free from influenza, would this be evidence of the prophylactic value of sodium chlorid? The science of therapeutics is complex enough at its best; and with commercialism dominating the production of therapeutic agents, the likelihood of ever arriving at anything approximating a true science of therapeutics seems hopeless (*Jour. A. M. A.*, Jan. 4, 1919, p. 45).

**COCA-COLA.**—Analyses made by federal chemists showed it to contain from 0.92 to 1.30 grains of caffeine to the fluid ounce. It would seem that in the interest of the public health the indiscriminate sale to children and adults of an alkaloid like caffeine in the enticing form of a "soft drink" is to be deprecated (*Jour. A. M. A.*, Jan. 25, 1919, p. 299).

**SOME "PATENT MEDICINES" INVESTIGATED BY THE GOVERNMENT.**—The following are the names of proprietary medicines which have been the subject of prosecution under the Federal Food and Drugs Act in the government's attempt to protect the public against fraudulent or misleadingly advertised products: Royal Baby's Safety; Simpson's Cerebro-Spinal Nerve Compound; Constitution Water; Tweed's Liniment; Pulmonol; Crown Skin Salve and Pile Cure; King of the World and Family Liniment; Ka-Ton-Ka; Greenhalgh Diphtheria Remedy; Mountain Rose Tonic Tablets and Herbaline; Parmit; Sulphurro; "Liveon, the 90 Day Consumption Cure"; "Liveon Lung Discs"; White Beaver's Cough Cream and Wonder Work; Watkins' Vegetable Anodyne Liniment, Female Remedy, and Kidney Tablets; Nature's Creation Co.'s Discovery; Radium Healing Balm; Phuton Kidney Remedy; Palmer's Skin

Whitener; Barnes Baby Relief; Sayman's Healing Salve; Sayman's Vegetable Wonder Soap; Humphreys' Pile Ointment; Witch Hazel Oil (Compound); Hill's Honey and Tar Compound; "La Franco Combination Treatment" and "La Franco Vitalizer No. 200" (*Jour. A. M. A.*, Jan. 25, 1919, p. 297).

## BOOK REVIEWS

**INFORMATION FOR THE TUBERCULOUS.** By F. W. Wittich, A.M., M.D., Instructor in Medicine and Physician in Charge Tuberculosis Dispensary, University of Minnesota Medical School. St. Louis: C. V. Mosby Company, 1918. Price, \$2.00.

This is a book that the physician may safely place in the hands of his patient and peruse himself with pleasure and profit. The author "at one time a patient of no light infection was on the cure for two years," and having regained his health imparts his message with a personal and sympathetic note that is almost tangible. The book is free from fads and fancies, is strictly orthodox inasmuch as only the approved hygienic, dietetic, therapeutic, and climatic measures are advocated and properly evaluated. It is not a system of rules for recovery, nor does it aim to put in the hands of the patient a *vade mecum*, the blind following of which would be sufficient. On the contrary, his object is to give an intelligent idea of the basic principles of the physiology, etiology, pathology and symptomatology of the disease, together with the therapeutic measures that have met with universal approval. All this is lucidly put forth and in a manner easily comprehended by any intelligent lay mind. And thus he engenders that all-necessary psychic status whereby the patient is enabled to give intelligent cooperation and be at all times *en rapport* with his medical advisor; and yet he goes sufficiently into detail to render the book of great practical value in the conduct of any case of tuberculosis. The nominal price of the book in no way indicates its intrinsic value but accomplishes the purpose of putting it within the reach of all persons suffering from pulmonary tuberculosis, whose recovery will undoubtedly be fostered by a perusal of its contents.

L. C. B.

**THE PREVENTION OF VENEREAL DISEASES.** By Otto May, M.A., M.D. (Cantar.), M.R.C.P. (London), Late Honorable Secretary, National Council for Combating Venereal Diseases. London: Henry Frowde, Hodder and Stoughton, Oxford University Press, Warwick Square, E. C., 1918. Price, \$3.00. American Branch, 35 West Thirty-Second Street, New York.

This book is divided into six chapters: 1. Education and Instruction. 2. Treatment in Relation to Prevention. 3. Prostitution and Venereal Disease. 4. Personal Prevention or Artificial Prophylaxis. 5. Venereal Disease and Marriage. 6. Summary, with an appendix of lectures for teachers and various acts on hygiene.

The book is beautifully written throughout. The best chapter is on "Education and Instruction," in which he calls attention to the importance of the very early training of children in sex problems and advises that school teachers be trained to understand the many sides of the problem, so that they may be capable of imparting a thorough understanding to their students.

He goes thoroughly into the many phases of handling prostitution with relation to venereal disease and discusses these phases in an unbiased manner.

The book is written very attractively and contains facts that every medical man interested in this problem should concern himself with. J. R. C.

# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

Volume XVI

CHICAGO, ILL., AND ST. LOUIS, MO., APRIL, 1919

NUMBER 4

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3517 Pine St., St. Louis, Mo.

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### ORIGINAL ARTICLES

#### SOME OBSERVATIONS ON SPINAL CORD SURGERY\*

With Demonstration of Specimens

ERNEST SACHS, M.D.

ST. LOUIS

In 1914 Dr. Schwab and I presented before this Society a paper on a series of seventy neuro-surgical cases of various types. It was our purpose then to appear before you from time to time to present certain groups of these cases. For obvious reasons, this has thus far not been possible.

To-night I propose to report on a series of spinal cases, forty-five in number, that I have operated upon in the last few years, and shall try to draw certain conclusions from them without going into a general discussion of spinal surgery. I shall not enter upon a discussion of the operative technic in this paper, as I feel that that is a question that would be of greater interest to surgeons.

In reviewing the histories of these cases one is struck at once by the length of time the patients have had their symptoms and how commonly the quack, the osteopath, and the Christian Scientist have had their hands on these patients. One is inevitably forced to the conclusion that these cases belong to a group that offer diagnostic difficulties and that they have been much neglected in our teaching in medical schools. This comes partly from the fact that until comparatively recently focal spinal lesions have been considered surgical curiosities, and it is only in the past ten years or less that neurologists have become enthusiastic about the surgical treatment of these conditions and are recognizing the need of early interference if the best results are to be obtained. The recognition of a focal lesion of the cord is, as a rule, quite simple and does not offer the many pitfalls and difficulties that beset one in handling intra-

cranial cases. Practically every case is characterized by spasticity of the lower extremities and the changes in reflexes that accompany spasticity. In addition, sensory disturbances, changes in pain, temperature or touch, commonly occur. Here is where the general practitioner most commonly encounters difficulties simply because he neglects two or three simple rules. To make a satisfactory sensory examination the patient must be comfortable, quiet, and at his ease, he must be lying down, he must have no clothing pressing on his body which might confuse his sensations, the examining room must be warm, and most important of all, the physician must not be in a hurry. These points are essential for a proper sensory examination. Examination of the spinal fluid may be very helpful. The finding of bright yellow fluid on lumbar puncture, what the French have called xanthochromia, is diagnostic of tumor. The fluid may or may not coagulate. In this series xanthochromatic fluid was found a number of times. Such yellow fluid is always found below the tumor, and is not true spinal fluid, but a transudate. The explanation is that the spinal canal is obstructed by the tumor and consequently the cerebrospinal circulation is obstructed and a transudate fills the space below the point of compression.

The majority of the cases in this series (27) are cases of spinal tumors or those diagnosed as such.

It is still generally supposed, and many textbooks lead one to think so, that one of the cardinal symptoms of spinal tumor is pain, and that the presence or absence of pain enables one to differentiate an intra- from an extra-spinal tumor. This, in my experience, is wrong. To wait for the development of pain in order to make a positive diagnosis of spinal tumor is as great a fallacy as to require the presence of headache, vomiting and choked disk for the diagnosis of brain tumor. There is this difference, however, that the majority of patients with spinal lesions do not have any severe pain during their illness and only the occasional case has any whatsoever. I have seen only two

\* Read before the St. Louis Medical Society, Feb. 1, 1919.



cases in this series in whom pain was a striking symptom, and in only one of these was the pain the symptom which made the patient seek relief. This man had bilateral sciatic pain from a tumor pressing on the cauda equina.

However, paresthesias of various kinds are very common, and may give the patients almost as much discomfort as the pain. These paresthesias constitute a most fascinating chapter in the study of focal spinal lesions. These paresthetic symptoms, that is, the subjective symptoms, precede any objective findings for

period when only paresthesias are present is in one way a very dangerous one, for that is when these patients go to quacks.

The operability of spinal tumors and how the duration of symptoms influences the operative results are questions that next suggest themselves. All extramedullary tumors, that is, tumors in the dura but outside of the cord, are operable, but the length of time the tumor is present gives no indication how seriously the

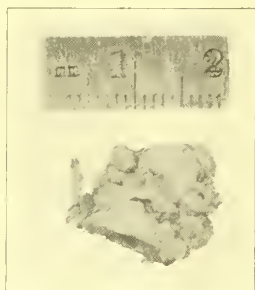


Fig. 1.—B. H., 35 years, 1914, paresthesia left leg. Following confinement total paralysis of left leg. Girdle sensation, but no pain. Improvement for short time, 1915, November, 1916, symptoms worse. Right leg became paralyzed. 1917, for several months was treated by chiropractic. Rectal and bladder involvement, but no total incontinence. Tumor removed October, 1917. All reflexes normal, March, 1918. Walks perfectly, slight disturbance in temperature sense in one leg. (Surg. No. 4692.)

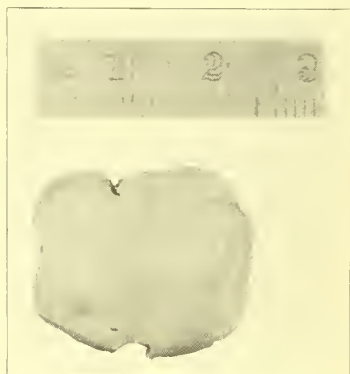


Fig. 2.—C. A. H., 45 years. Four years ago burning sensation in right leg. Gradual development of spastic paralysis of one leg. Osteopaths and other quacks treated him for years. Two weeks before admission terrific bilateral sciatic pain. Tumor removed October, 1918; immediate relief of pain after tumor removal. Report two months after operation, complete recovery. (Surg. No. 6201.)

months and sometimes years. One patient for example, for an entire year suffered fearful discomfort when water touched her skin. The temperature of the water made no difference. Only at the end of a year did the first objective findings appear, a pathological toe reflex and a diminution of sensation. It is of vital importance to know that these paresthesias occur, for watching such patients with care will make it possible to remove their tumor before any permanent injury to the cord has occurred. The

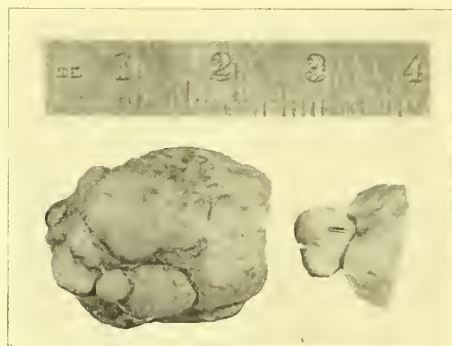


Fig. 3.—N. F., 39 years. Pain in sacral region, at times severe; three months later stiffness in hips and legs. Unable to stand up. Complete paralysis since January, 1918. Fearful contractures. Patient, on admission, had her heels impinging on her buttocks. Had been treated for infectious arthritis. All her teeth removed on account of pyorrhea which was considered the source of infection. Tumor readily removed. Improvement in legs. Treatment difficult on account of subluxation of both knee joints on account of prolonged contractures. Bed sores developed; patient died four months after operation. (Surg. No. 5849.)

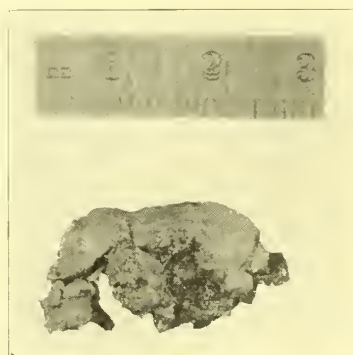


Fig. 4.—M. F., 32 years. Began August, 1917, with paresthesia, could not stand water on the skin. June, 1918, difficulty in walking; loss of power; Babinski; slight bladder incontinence. Tumor removed, August, 1918. Complete disappearance of all objective findings within two weeks. Paresthesia completely gone after two months. (Surg. No. 6011.)

cord has been compressed. I have had a patient recover so completely that six months after the operation there was not even a pathological reflex to indicate the existence of the trouble, and yet the tumor had been present for three years (Fig. 1). In another the symptoms had been present fourteen years (Fig. 2), and perfect recovery followed the removal of the tumor, while in another patient who had only had her symptoms one year there was practically no improvement following operation

(Fig. 3); yet the first and last patients were carried in on stretchers quite unable to walk.

In other words, there are other factors than the time element which play a rôle in determining the extent of destruction of a cord. The rate of growth of the tumor and the pathological type are factors that determine the extent of the permanent disability following a tumor removal. A soft tumor of considerable

cord exists is easy, but the determination of the exact site of such a lesion may at times be very difficult, and prolonged and repeated examinations may be necessary before the exact level of the lesion can be determined. A case about six months ago brought this out most strikingly. Repeated examinations, some ten or twelve in number, the usual tests with pin, cotton-wool, and hot and cold test tubes gave



Fig. 5.—R. G., 29 years. Following fall three and one-half years before admission, pain in left abdomen. Pain for two years. Weakness lasted for nine months after onset. Fourteen months after onset total paralysis of both lower extremities and urinary symptoms. In spite of negative Wassermann, treated with mercury and iodides. Slight improvement. Carried in on stretcher. Four weeks after tumor removal, patient walked out of hospital with cane. One leg perfectly recovered. Left foot slightly spastic several years after tumor was removed, but patient walks about and works. (Surg. No. 1279.)

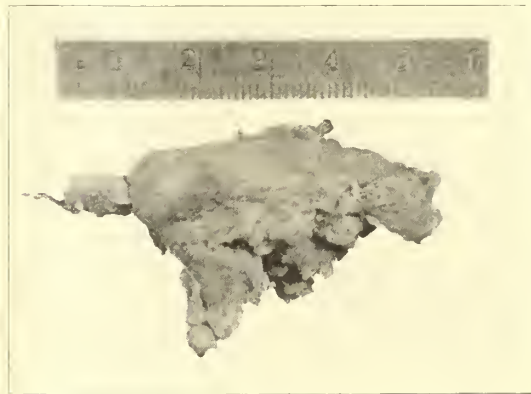


Fig. 7.—P. S. G., 24 years. Eight years before admission dragging of feet. In three months total paralysis from the intermammary line down. Diagnosed as transverse myelitis; told there was no hope. Past eight years attended by every conceivable kind of quack. Never any pain. Tumor grown through body of the vertebra into the posterior mediastinum. Spinal cord ribbon like. No improvement of symptoms following removal. (Surg. No. 6234.)

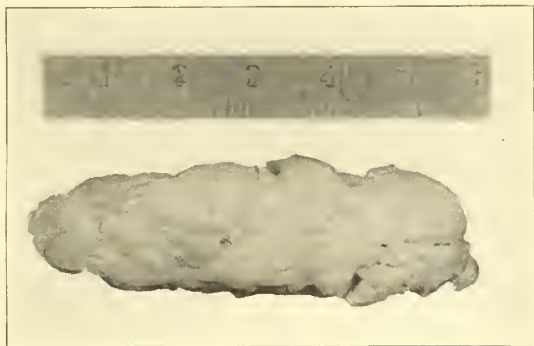


Fig. 6.—C. S. S., 47 years. In 1912 fell from wagon. Month later, pain in left side. Six years ago pain in left lower abdominal quadrant. Three years later difficulty in lifting his feet; 1916, paresthesia of feet; August, 1918, could walk about 50 yards while being supported. Three months after tumor removal worked on his farm, walked as well as ever. (Surg. No. 6019.)

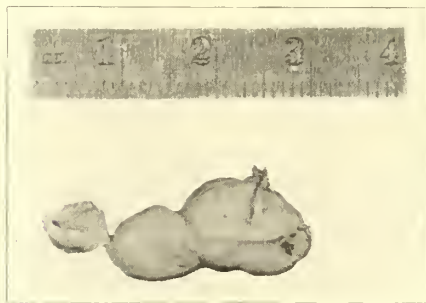


Fig. 8.—W. L. G., 62 years. June, 1917, stumbled in walking; backache; peculiar feeling in legs. Stumbled in dark; bladder symptoms; various diagnoses, tabes, functional nervous disease, enlarged prostate. On admission double Babinski, ankle clonus, diminished sensation from umbilicus down. Tumor removed. Uneventful recovery; out of bed tenth day. Died that night of angina pectoris. Autopsy showed one coronary obliterated. (Surg. No. 4813.)

size may not injure a cord nearly as much as a small hard fibroma (Figs. 4 and 5). The tumor in Figure 6, for example, had been present for three years, yet the patient had power in his legs and could walk with difficulty, while the tumor shown in Figure 7 had been present eight years but had caused a complete paralysis with total anesthesia within three months.

I remarked earlier in this paper that the diagnosis of a focal lesion is easy. I meant by this the recognition that a focal lesion of the

confusing results. Finally the correct line of change of sensation was established with a piece of ice which produced very painful sensations.

The frequency of intra- and extramedullary tumors, that is, tumor outside or in the substance of the cord is of great interest from a prognostic standpoint. I have thus far never seen a true intramedullary tumor. No doubt they occur, but I know that many tumors have been called intramedullary which never should have been so classed.



Just because a tumor lies in a deep depression or excavation in the cord, it must not be called an intramedullary tumor. If it is growing from the meninges no matter how deeply imbedded it is in the cord, it is an extramedullary tumor.

All extramedullary tumors are operable, and in my experience the majority are benign, differing in this respect from cerebral tumors.

The intramedullary tumors also can be removed by a method known as the extrusion method. That is, an incision is made over the tumor through the cord substance, and in a few minutes or days the tumor delivers itself, and if it does not extrude promptly it must be removed at a secondary operation.

Cases	LAMINECTOMIES Number	Deaths
Tumors .....	13	2
Posterior root sections.....	9	1
Serous pachymeningitis .....	6	0
Negative findings .....	6*	0
Fractures .....	5	1
Tuberculosis .....	1	0
Syphilis .....	1	0
Transverse myelitis .....	1	0
Spinal sclerosis .....	1	1
Meningitis** .....	2	2

\* Three operations on one case.

\*\* The two meningitis cases are not included since they died from their disease.

Mortality for laminectomies 11.6 per cent.

Mortality for tumors and serous pachymeningitis, 19 cases, 10.5 per cent.

Any cases that died in the hospital, no matter how long they remained after operation, are counted as deaths. Thus one patient, one of the tumor cases, developed bed sores and died four months after the tumor was removed.

A point of great importance is how frequently the diagnosis of tumor is made and the operation does not reveal a tumor. In this series, twenty-seven cases were operated upon with the diagnosis of tumor. In these a tumor was found and removed in thirteen. In six there was a serous pachymeningitis or local collection of fluid, practically a cyst, while in six the findings were negative, but three of these six operations were performed on one patient. So that there was a mistake in diagnosis in four cases.

There were two deaths in this group, a mortality of 9½ per cent. One of these patients got up at the end of two weeks after an uneventful recovery and dropped dead from an attack of angina pectoris, the autopsy showing a complete closure of one coronary artery. The other case showed slight improvement after the tumor was removed, developed bed sores, and died four months later from a sepsis as a result of the bed sores. Two other cases showed no improvement after the tumor was removed. One had had her symptoms for six years, the

other for eight. I feel very strongly that every patient with symptoms of a focal spinal lesion has not had a fair chance until they have been explored. The operation of laminectomy when carefully carried out is attended by little danger. The technic is different than in general surgical operations, and the surgeon must keep in mind the nature of the tissue he is dealing with. For example, in order to work on the anterior surface of the cord, a special technic is necessary. The tumor shown in Figure 8, for example, lay entirely in front of the cord. In order to get it out, the cord had to be turned 180 degrees, for one never must use even the gentlest retractor on the cord as otherwise a paralysis which may be permanent is certain to occur.

I am sometimes asked how disabling to a patient is a laminectomy. When carefully done there rarely are any symptoms as a result of the operation. Occasionally, there may be urinary disturbances for a few days, but these always clear up. The operative field must, however, be absolutely dry before the dura is opened. Blood in the subarachnoid space may produce very marked symptoms, and even permanent disability. If a patient's symptoms do not begin to clear up within five days after operation, the possibility of a blood clot and therefore secondary operation must be considered. The removal of the spinous processes in no way weakens the spine and rarely affects the mobility.

Nine cases had a posterior root section for spasticity. This operation is somewhat more formidable than the ordinary laminectomy as a more extensive exposure of the cord is necessary. It is best carried out in one stage. With careful hemostasis there is no shock to the operation, and if the cases are properly selected, careful exercises are instituted afterwards, the cases are markedly benefited. This operation is designed to relieve the spasticity in cases that have no focal lesion. In selecting the suitable case one must determine that there is plenty of power underlying the spasticity, otherwise a spastic paralysis will merely be changed to a flaccid one. Occasionally, a spinal syphilis is improved by laminectomy when specific treatment has no effect.

Drainage of the spinal canal for a meningitis in my experience is of no avail, though a few cases have been reported by others that were benefited.

The last group is that which deals with fractures. About these there is considerable difference of opinion.

One of the questions to consider is, can one determine whether there is a complete severance of the cord. I do not believe there is any sign or symptom that is pathognomonic. If we wait until we can determine this, irreparable damage has already been done the cord. I be-

lieve, therefore, that the advice of the late Dr. Allen of Philadelphia should be followed, namely, that the cases with symptoms of a complete paraplegia should be explored in the first twenty-four hours. If they are seen later than this, it is very doubtful how much can be accomplished. Occasionally an intraspinal anastomosis may be of benefit or the evacuation of a traumatic cyst may help, but as a rule, little can be gained after twenty-four or forty-eight hours.

In conclusion I should like to emphasize the following points:

1. Spinal tumors are not as rare as has hitherto been supposed.
2. The recognition of the existence of a focal spinal lesion is comparatively easy.
3. The earliest symptom of a focal lesion is usually paresthesia and not pain.
4. Pain is not a necessary symptom for the diagnosis of a spinal lesion.
5. Laminectomy is a safe operation, but requires a special technic.
6. There are other spinal conditions than spinal tumors that may be relieved by operation.
7. Early operation in fracture of the spine with symptoms of complete transverse myelitis is, in my opinion, the wiser course.
8. Every focal spinal lesion should have an exploratory laminectomy.

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#### NASAL SINUSES AND ASTHMA\*

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Brown, in his complete work on asthma, describes the disease as dramatic in symptoms, elusive in pathology, cloaked in mystery, and sometimes called the epilepsy of the lungs. We have no disease in medicine, that we are called upon to treat, that has more theories of causation with as little results to an agreement as this. These theories have simply led to an intense uncertainty, ranging from a neurosis to some blood condition. The treatment is just as uncertain as the theories of causation. This may be due to the nature of the disease, since few physicians have an opportunity to really study a case, as they are called during the height of an attack to administer adrenalin, morphin, etc. They rarely see the patient again until the next attack.

Some years ago my attention was called to the immediate relief of a case of asthma by the removal of nasal polyps; this led me to investigate this phenomenon. Voltoloni, in Wein,

1871, called the attention of the profession to a case of asthma cured by the removal of nasal polyps. Since then many cases have been reported in which various pathological conditions of the nose and adjacent respiratory passages were thought to be the cause of asthma.

Bostock in 1818, describes his own case which is the first one on record in which any reference is made to the nasopharynx. His attack was preceded by a sense of fullness of the head; to this succeeded irritation of the nose, producing sneezing, which occurs in fits of violence. Then comes the chest symptoms. Weber, in 1877, stated that he believed an analogy exists between stoppage of the nose from cold and asthmatic breathing. Then, in 1879, Hartmann and Schaefer of Germany, and Porter of New York reported cases of asthma cured by removal of nasal polyps.

Frankel, in 1881, stated that polyps do not directly cause asthma, but that changes therefrom do produce it. Daly, in 1882, and Bersgin, state that asthma is due to nasal conditions. Roe and Silee, in 1888, in the Jour. A. M. A., report cases of asthma cured by nasal operation.

Bosworth, in 1886, says, that just as far as we can cure nasal disease, just so far can we cure asthma. This is the first radical statement made regarding the cure of asthma or the cause of asthma, in reference to the nose.

Watson-Williams, London, 1901, says asthmatic attacks are generally preceded by or accompanied by sneezing and rhinorrhea, or may be replaced by paroxysmal sneezing with hypertrophic rhinitis, waterlogged mucous membrane of nose and polyps, but these are not the cause of asthma. We find sensitive areas in the mucosa, which, when probed, give rise to violent cough, although the successful treatment of these has relieved asthma, and in cases cured.

We have up to 1901, 154 papers on asthma, describing all sorts of theories, and these few on nasal causes. It seems peculiar that with the report of these cases of asthma cured by means of nasal operations, investigators should, as a rule, consider the nose of no importance. Since 1901 we have had 321 papers on asthma and its causes, describing various theories, but with little definite results. Many describe sneezing; this symptom we will bear in mind.

Moschovitz, 1911, states the theory that anaphylaxis is the cause of asthma, because of the eosinophilia of the two conditions. Matthews reports 104 cases of asthma with intranasal treatment with 31 cures, 32 markedly improved, 19 improved and 22 unimproved. He states a study of each individual history indicates that almost invariably relief of the asthmatic symptoms corresponds in a degree to the extent to which the pathological condition in the nostrils, nasal sinuses, and nasopharynx have been improved. He thinks the relief due to free drain-

\* Read by title at the 61st Annual Meeting of the Missouri State Medical Association, Jefferson City, May 6-8, 1918.



age, and cure of the part affected will in succession prevent absorption of the protein, the anaphylactic reaction and the asthmatic attacks. He further states, in a later paper reporting 300 cases, that 90 per cent. had lesions in the upper respiratory passages. He also says that the relief of asthma by any known treatment does not mean that the patient is permanently cured, since the susceptibility remains through life and signs and symptoms will recur whenever there exists conditions favorable to the production and absorption of the specific antigen to which the individual is sensitive. Since then, there have been numerous papers, still on various causes, from dust, drugs, tuberculosis, etc. Among these Abbott states that the asthma will improve just as fast as the ethmoiditis. Bosworth, 1888, found nasal polyps in 80 cases. Francis reports 36 polypoid lesions out of 379. Schmiegelow reports 139 cases with 31 polyps; Scheck 64 per cent. of all cases with nasal pathology. Lublinski reports 500 cases, 143 with nasal conditions; Bosworth, 80 cases all had nasal surgery with 46 cures; Francis, 300 cases cured by nasal operations. In a conversation with this essayist, Matthews stated that all cases of asthma should have their ethmoids explored on operation; this is, of course, very radical. Lublinski reported 143 cases, 27 cured on nasal operation, 23 improved; Schmiegelow 56 cases, 32 cured, 24 unimproved; Heymann 54 cases, 29 improved. Wall operated 23 cases, all cured; Abbott 44 with 42 cures. Abellis goes as far as to recommend homes for asthmatics under care of rhinologists. There are many more, but these shall suffice.

Notwithstanding this tremendous number of cases, we still have men who have never successfully treated a case of asthma, writing papers on the neurosis of asthma, and treating the same with potassium iodid and morphin.

I have operated upon 39 cases of asthma with 35 cures. These have all been selected cases. I shall report a few rather typical cases as a means of illustration.

CASE 1.—G. B., referred to me at the Kansas City General Hospital, 1914; examination shows upper nasal chamber filled with polyps. All other examinations negative. Nose had been operated by means of snaring polyps twice before. Had been unable to work for three years on account of more or less constant asthmatic attacks. Radical ethmoid operations. Patient left hospital in a week to return to work with apparent cure; returned to my office in six months having gained 36 pounds. Has now been free of asthma for over three years.

CASE 2.—G. S., referred by Dr. Faust, 1915, Kansas City, Kan. This man was purple. One could hear him breathe at a great distance. He was a large, living skeleton. Nose showed hyperplastic ethmoid disease. Operation, cure. Gained 54 pounds in four months, weight 186 pounds. Went back to work as a railroad foreman. His principal complaint before operation was sneezing and sense of fullness of nose.

CASE 3.—Mrs. G., 32 years old, Lamoni, Ohio, 1915; referred by Dr. Harrington. Brought to the Inde-

pendence Sanatorium on a stretcher. Nose showed intense nasal edema with polypoid ethmoiditis; operation. Walked to station in three weeks. Has never had an attack of asthma since. Her complaint was attacks of sneezing and discharge from nose.

CASE 4.—B. C., girl, 12 years old, referred by Dr. Pickard, 1916. Asthma since childhood. Tonsils and adenoids removed, with repeated nasal examination and no relief. Examination showed no polyps, but chronic non-suppurative ethmoiditis. Operation and cure. Patient plays golf and walks miles each day. She complained of fullness in nose and repeated colds, sneezing and discharge.

CASE 5.—Mrs. O., 65 years old, referred by Dr. Faust, 1916. Terrific asthma requiring both adrenalin and morphin. Double ethmoid operation and cure. Nose showed both ethmoids full of very small polyps; considerable sneezing and discharge.

CASE 6.—Mrs. S., referred by Dr. Faust, constant asthma for six years. Showed nasal polyps from both ethmoids. Some complaint of sneezing and sense of fullness. Double ethmoid operation with complete relief to date.

CASE 7.—Miss D., referred by Dr. Wolf. Had four nasal operations for polyps here in the city with no result. Constant asthma for five years. Double radical ethmoid operation and cure. Both posterior ethmoids full of polyps. These had not been operated upon at previous operation.

CASE 8.—Miss S., Coffeyville, Kan., 39 years old, 1915. Asthma for several years. Nose showed blocked ethmoiditis due to enlarged M. T. and polypoid ethmoiditis. Operation and cure of three years' standing.

I have selected these cases ranging from 12 years to 65 years of age to show the conditions existing at all ages. The improvement after operation is remarkable and constant. The later cases instituted a system of breathing exercises and autovaccine made from the tissues of the nose removed.

I think with the above authors that these conditions are due to a protein absorption from the nasal accessory sinuses due to a polypoid degeneration of their lining from insufficient drainage, causing an anaphylactic reaction. These degenerations are due to a low-grade infection of the nasal sinuses causing mucoid and polypoid degenerations, hence the use of the vaccines. I have eliminated from this paper the discussion of all cases of asthma with an undoubted tubercular foundation, cardiac asthma, etc. There are, of course, many many other conditions playing an equally important part in the causation of asthma, such as lues, unstable vasomotor system, alcohol, endocranious glands, Riggs' disease, richitis, neurosis and psychoses, muscle spasm, bronchitis, etc., but I hope I have impressed upon you the necessity for a thorough nasal examination in all cases of asthma.

All these patients gave about the same history of attacks of sneezing, sense of fullness of the nose, nasal discharge, and later the asthmatic attack. The nose in all of these cases but one show a hyperplastic sinus disease. Cases of asthma without nasal pathology are eliminated.

## PSYCHOSES COMPLICATING INFLUENZA \*

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ST. LOUIS

Among the causes of mental disorders, the rôle of physical disease as an etiologic factor has long been recognized as one of great importance. In this group of exogenous causes one must include not alone the acute infectious disorders but as well the more chronic diseases of the internal organs. Of the acute conditions which may be accompanied by mental disorders mention may be made of typhoid fever erysipelas, acute articular rheumatism, scarlet fever and malaria; while psychoses accompanying diseases of the internal organs are seen in nephritis, diabetes, hyperthyroidism and heart disease.

In the presence of such an epidemic as that which has been with us during the past few months, one interested in mental medicine naturally inquires in how far influenza as an acute infectious disease is responsible for mental disorder. In this connection several questions come naturally into the foreground. Is influenza an agent of etiologic importance in the production of mental disorder? With what frequency do psychoses complicate this disease? Are such psychoses of a specific variety or in any way characteristic of their causation? What is the pathogenesis? What is the treatment and what the prognosis?

The participation of the nervous system in the symptomatology of influenza is rarely lacking; indeed, in some cases such symptoms may be the only evidence of disease. Headache, myalgia, neuralgia, insomnia, dizziness, inertia and weakness are all important in the prodromal phases. Such moderately mild nervous symptoms belong to the typical picture of every true grip. Although in some cases the nervous symptoms are secondary, in others they are sufficiently prominent to justify the term "nervous form." In others, though not prominent during the febrile period, they appear to be the most important symptoms in the after stages. While most of these nervous symptoms are functional in character, not infrequently signs of serious organic disease of the nervous system are met with, such as meningitis, myelitis, neuritis, hemorrhagic encephalitis, monoplegias and hemiplegias.

That psychoses complicating influenza do occur there can be no doubt. On the other hand, that the frequency of such complications is extremely variable is equally certain. The most important controlling factor in determining the frequency appears to be found in the

clinical type of the disease prevalent. This is strikingly illustrated by a comparison of the present epidemic with that of 1890. In the latter the nervous form predominated, whereas the clinical type of the disease in the present epidemic is almost exclusively respiratory. Accordingly it is observed that the nervous and mental manifestations in this epidemic have not been prominent, whereas thirty years ago they were evident as the most important symptoms of the disease. Indeed, so prominent were the nervous symptoms, the opinion was expressed that the virus of influenza attacked primarily, not the respiratory tract, but the nervous system and that influenza was always a true nervous fever. Also, it was observed that mental disturbances were more frequent after influenza than after any other zymotic disease. Contrasted with these observations is the experience of the present epidemic during which the pathologic invasion has been primarily respiratory in distribution. In over 2,000 cases of influenza at Jefferson Barracks, although the usual number of deliria occurred, there was only one instance of a true psychosis. In this case, moreover, the psychosis did not appear until the temperature was down and erysipelas developed. In two other cases, a transient paranoid delusional state with hallucinations was observed. In another camp where there were 613 cases there was but a single instance of delirium. At the City Sanitarium there has been but one case admitted where a psychosis developed in connection with influenza and it is yet questionable if this is not really an endogenous psychosis in which the infection had acted merely as a provoking agent. Mild psychotic reactions following influenza have been seen in the past several weeks, in which depression was the most prominent element, but these have in no case amounted to a true psychosis, nothing more than neurasthenic reactions with an exaggerated depressive coloring.

The variety of psychoses complicating influenza is rather wide, but may be grouped conveniently according to their time of occurrence as (1) febrile, and (2) postfebrile. In the first group we meet with two types, delirium and psychosis. Febrile delirium is often associated with dulling and clouding of consciousness, hyperesthesia of the organs of special sense and transient excitement or depression. The febrile deliria are really nothing else but acute transitory psychoses and from these to the more prolonged psychoses all transition grades may be encountered. Such deliria may occur at the very onset with the initial fever, and be associated with hallucinations and motor excitement. In duration they cover several hours or even days and may be remittent. A pneumonia is not essential to their occurrence. The psychoses

\* Read at the regular meeting of the St. Louis Medical Society, Dec. 21, 1918.



of the febrile period may onset during the initial stages of influenza, but more frequently develop at its height, usually on the second or third day. They are usually sudden in onset and rapid in development; consciousness is always, though at times very little disturbed; dreamy states with disorientation are prominent. Emotionally, these patients are seldom elated, but usually depressed and anxious, with delusions of a persecutory, hypochondriac or self-accusatory character. Though not always, auditory and visual hallucinations are usually present. On the motor side there is increased activity, and where excitement is present, laughing, singing and screaming. The psychosis usually outlasts the fever and the disappearance of the excitement and clearing of consciousness is abrupt, with a partial amnesia, or only incomplete recollection of occurrences having transpired during the psychosis.

In the second group, the postfebrile psychoses usually develop from four to eight days after the fever subsides, though sometimes as late as three weeks. The psychoses of this group are not so uniform in their symptomatology, but three main types may be recognized: the acute exhaustive, the depressive and the maniacal. The psychosis of acute exhaustion, sometimes spoken of as collapse delirium, is speedy in its development. There is acute excitement associated with numerous hallucinations and usually an anxious, seldom elated, emotional state together with delusions more often of depressive than exalted character. There is associated with this an extreme physical exhaustion and bodily weakness. The depressive psychoses vary widely from mild neurasthenic, hypochondriac reactions to extreme, severe melancholias. The picture is one of complaint, distrust, anxiety and fear, sometimes of sufficient depth to lead to suicidal attempts. This type of psychosis is of all the most frequently observed as complicating influenza. The maniacal type, like the others, rapidly reaches its height. The picture is one of acute, simple mania, without hallucinations or delusions and with very little clouding of consciousness or confusion.

A third group of mental diseases complicating influenza should be mentioned because of their practical importance and these we may speak of as the pseudo-influenzal psychoses. Here are included mainly endogenous psychoses brought into activity by the infection, in some instances a more accidental association than otherwise. As examples of this a true manic-depressive psychosis may appear in relation to the influenza, or a latent *praecox* may be lighted up, or, a paretic syndrome hastened into a flourishing stage. To be sure, in a way, these psychoses complicate the infection, but to speak of them loosely as influenzal psychoses, as has

been done by some, obviously adds confusion to the situation. Although influenza may in such instances bear a causal relationship to the psychosis, its importance as an etiologic agent is more coincidental or contributory than primary and fundamental.

In the psychotic symptomatology is there any characteristic by which the etiologic agent can be recognized? Mental symptom complexes similar to those described as complications of influenza also occur in connection with other infectious, toxic and organic diseases. The uniformity of mental symptoms arising from several dissimilar physical diseases plainly indicates that these psychoses are not characteristic of influenza. We have certain types of mental reactions occurring with influenza as the underlying cause, but, also, we find other acute infectious diseases leading to exhaustion as well as toxic states engendered by disease of various internal organs, all giving rise to a similar group of mental disorders; as such they may all be grouped collectively under the general heading of symptomatic psychoses, in the etiology of which influenza may play an important rôle as one of many different factors.

Regarding the pathogenesis of mental disorders complicating influenza there are several interesting points. By what means does influenza act to produce a psychosis? Attention has been called to the fact that influenza may have as its complications anything from mild functional to serious organic disorders of the nervous system, and from simple, harmless deliria there is unbroken chain up to severe more or less lasting psychoses. So far as the psychoses are concerned it has been pointed out that there are two groups as determined by the time of their occurrence in relation to the fever. The fever alone cannot be responsible as there are psychoses which develop even weeks after the temperature has been down to normal. Neither can the severity of the infection be held wholly accountable because the occurrence of psychoses does not bear any fixed relation to the degree of physical sickness. Psychoses are encountered in the mildest cases of grip or absent in the most severe. The toxic element is often held responsible and here the analogy of the very extreme toxemia in cases of diphtheria with insignificant focal disease is called in as supporting evidence. Toxemia in some cases of psychoses is undoubtedly an important etiologic factor, but this, too, is not invariably present where psychoses develop. To the late exhaustive state following influenza is attributed an important part in the production of mental disorders; especially is this true of those psychoses occurring during the postfebrile stage of the disease. And here a most pertinent comment may be made regarding the normal psychic make-up of the indi-

vidual who develops a mental disorder as a complication of influenza. A study of the individual's psychic norm in these cases reveals the interesting fact that in the postfebrile psychoses we almost invariably find strong evidence of predisposition shown in bad heredity or psychopathic trend. The constitutionally unstable neuropsychic mechanism when further disequilibrated by the incidence of the infectious disease, provides a fertile soil on which the psychosis may take root and thrive. This viewpoint emphasizes the fact that it is the personality of the individual which is the important factor in the causation of the psychosis of which the influenza is but an exciting element.

Of the treatment and prognosis there is little that need be said. As the psychosis is but the complicating symptomatic expression of the underlying physical condition, it becomes self-evident that it should not be treated as the disease itself. Special situations from the mental state may demand attention, the refusal of nourishment must be cared for, the excitement in part controlled and possible suicide guarded against. Careful and understanding nursing is more important than medication. The prognosis, though good in most instances, depends considerably on the type of psychosis. In the psychoses of the febrile group the outcome in recovery is the rule. The same is true of the postfebrile psychoses which, however, are of slower recovery, often far outlasting all traces of the physical disease. For the pseudo-influenzal psychoses the prognosis is, naturally, that of those psychoses under other etiologic circumstances. The recognition of these pseudo-influenzal psychosis is not always an easy matter, and one may be cautioned to be careful in jumping at the conclusion that every psychosis complicating influenza is merely symptomatic and therefore of good prognosis. A case of paresis may first attract attention in connection with an attack of influenza and here the prognosis is decidedly the opposite of good.

In conclusion it may be said that influenza is an agent of etiologic importance in the production of psychoses; that the frequency with which psychoses complicate influenza varies according to the clinical type of the disease, having been infrequent in the present epidemic; that such psychoses are not characteristic of influenza but are similar to those occurring with other infectious, toxic and organic diseases and of which the psychosis is merely symptomatic; that the pathogenesis is partly found in the toxic-exhaustive elements of the disease but does not become effective without an underlying psychopathic constitution; that the treatment, with the exception of certain special features, is that of the underlying disease and that the prognosis as a general rule is favorable.

University Club Building.

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ONE HUNDRED YEARS OF MEDICINE  
IN MISSOURI\*

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A theme as complex as this cannot be approached except with a feeling of diffidence, and yet it is so worthy and inspiring that no member of the profession can decline such an opportunity to glorify the hundred years' work of medicine in Missouri.

Medicine is an exacting taskmistress who is content with no less than a life of devotion. And rightly so, for she has collected together the sciences of chemistry, physics, anatomy and physiology for her own beneficent purposes. Compare medicine in this regard with that maleficent combination of sciences which during these hundred years have increased and multiplied beyond the wildest stretch of the imagination, the means of death and destruction, by utilizing the exactness of mathematics, the certainty of physics, and the inexorableness of

\* An address delivered at the Missouri Centennial Celebration held at Columbia, Mo., Jan. 8, 1918.



chemistry. Harnessed to the chariot of Mars, these sciences are as furies fraught with woe to the world, but when Hygiea holds the reins they bring comfort and health to afflicted humanity.

To save and to help have been the battle-cry of medicine in all generations, and this has been handed down from time immorial.

In this view I could, of course, describe the medicine of the last hundred years by pointing to the profession as it is today and say, "This is its work and must therefore reflect its character," but if I should attempt to analyze the picture, I fear I could only give you fragments which would tax your own discrimination and judgment to harmonize.

Perhaps it will be best to put a few of the great figures on the screen, as it were, to show some of the activities for which they were held in high regard and to attempt to join these together to make a story more or less fitting to the occasion.

The first physicians of Missouri were, as a rule, men of good education for their times, men who would have graced the profession in the older countries of the world, but the spirit of adventure and the love of the open places made them pioneers in a new land.

The one outstanding medical man of a hundred years ago was Bernard G. Farrar, scholar, statesman, pioneer, soldier and, above all, man of medicine. He was a potent element in the community from the time he came to the state in 1806, when twenty-one years of age, until he fell a victim of the cholera epidemic in 1849. In 1818 he was at the height of his reputation and was known far and wide for his surgical skill. He was a worthy successor of that other great pioneer, Dr. Antoine François Saugrain, who died in 1820.

Contemporaneous with him was William Carr Lane, first mayor of St. Louis and for nine times elected to that office, a man of extensive acquaintance and of great personal as well as political influence.

In 1835 an Army surgeon named William Beaumont was ordered to Jefferson Barracks and from that time on became a resident of this state, an honored citizen, who left the Army rather than remove from the place that he had chosen for his home. He had already written the wonderful account of his experiments on Alexis St. Martin and his reputation as a scientist had, therefore, preceded him. It is doubtful, however, if his associates ever fully appreciated what he had done for physiology and medicine. It was left for Sir William Osler and our own lamented Jesse S. Myer to give him the place for which he so modestly worked. He passed away in 1853, beloved by all who knew him.

One of the most interesting men of the time was one John Sappington, who came to Saline County, Mo., from Tennessee about 1820. He took up the cudgels against the practice of blood letting and calomel dosage for fevers and advocated the use of Peruvian bark or quinin for the cure of all fevers which he claimed belonged to one class. When quite an old man he wrote a book on "The Theory and Treatment of Fevers," published in Arrow Rock, Mo., which even today excites a great deal of interest. His text is preceded by numerous testimonials from citizens of Saline, Cooper, and Howard Counties, Mo., and from Tennessee, Alabama and other states accounting the value of his treatment and recommending it most highly. Inasmuch as he claims to have sold a million boxes of his pills, one might consider him, in the light of modern day practice, unprofessional. But we have the assurance of Dr. Gregory, who knew him, that he was fully accepted by the profession. Indeed, there is no attempt made in his book to deceive, but every effort to oppose the views of Currie and Rush by giving the light of day to his own facts and theories.

The decade beginning 1840 was destined to become an important period in the development of the medical profession of Missouri and of St. Louis in particular, for the tide of emigration brought into the state such men as McDowell, Pope, J. B. Johnson, Linton, Pollak, Pallen, Gregory, McPheeters, Brainard, John S. Moore, Boisliniere, Hodgen, Curtmann and Litton, men whose memory still bears witness to the important place they occupied not only in Missouri medicine but quite as much in the annals of the profession of America.

Even to this day we cannot speak of McDowell without corresponding mention of Pope. They were natural leaders of men, both surgeons of wide attainments and they became great protagonists each with his devoted followers breaking the profession up into two hostile camps with all the bitterness and acrimony that could be engendered in a small city, such as St. Louis was at that time.

Joseph Nash McDowell, nephew of Ephraim McDowell, who performed the first ovariectomy, was born in 1805. He was trained in medicine by his brother-in-law, Dr. Daniel Drake, and Samuel D. Gross, who then resided in Cincinnati, and on coming to St. Louis, fresh from his teaching experiences in the medical college at Cincinnati, he established the first medical college in the state, which was then known as the Kemper Medical College. He continued in the direction of the Missouri Medical College, which succeeded this institution, until he espoused the cause of the Confederacy at the beginning of the war.

Charles Alexander Pope, born in 1818, was also a student of Daniel Drake, but he received his degree from the University of Pennsylvania and then spent two years in postgraduate study in Paris. On coming to St. Louis in 1842, he became identified as professor of anatomy with the Medical Department of St. Louis University which was established in 1842. It did not take him long to become dominant in the school and this dominance continued until the end of the Civil War in 1865.

Daniel Brainard, who was one of the original faculty of the medical school founded by St. Louis University, was not long a resident of Missouri. In 1843 he removed to Chicago, where he established the Rush Medical College at the end of the year.

John T. Hodgen perhaps occupies a higher national position than any Missouri physician during the past hundred years. From the time he entered the profession in 1848 until his death in 1882, his life was one of continually advancing usefulness. He became surgeon-general of the Missouri forces during the war and thus laid the foundation for much of the riper surgery of his later years. His great device, the Hodgen splint, born of his experience in the Civil War is still justifying its great value in the present war.

M. L. Linton (1806-1872), who was of great influence as a teacher, was the author of a book on the "Outlines of Pathology" and established in 1843 the *St. Louis Medical and Surgical Journal*, the first medical journal in the state.

Louis Charles Boisliniere, born in 1816 and died in 1896, one of the foremost obstetricians of this country, is still remembered for his kindly spirit, his lovable attention and help to young men entering the profession and for his wonderful ability as a teacher.

Simon Pollak, who even in his advanced age was always on the side of the progressive in medicine, founded the first medical clinic in the state and in 1861 established the first eye and ear clinic west of the Mississippi.

There are many more great men of these and later times that are deserving of mention: Abram Litton, who for a half century was a teacher of chemistry; E. H. Gregory, the kindly old man who almost as long was a teacher of surgery; J. W. Jackson, who established the first railroad hospital in America; W. B. Outten, who developed what might be called the profession of railway surgery; J. W. Wood and I. N. Ridge, pioneers of Kansas City; W. H. Duncan, who found time in spite of his large country practice to act for so many years as treasurer of the University of Missouri; Charles O. Curtmann, professor of chemistry; Henry H. Mudd, surgeon and teacher of note; O. P.

Lankford, the successor of McDowell; Adam Hammer, talented but erratic; G. M. B. Maughs, at one time mayor of Kansas City, a practitioner of note in both St. Louis and Kansas City; Thomas F. Rumbold, said to have been the first rhinologist in America; G. A. Moses, father and son, both well and favorably known; the erudite E. W. Shaufler; the pioneer ophthalmologist, John Green; the courteous and talented C. E. Michel; A. C. Bernays, brilliant surgeon untrammelled by convention; the handsome J. B. Johnson, of whom it was said that he never willingly accepted a fee; P. G. Robinson, who hailed South Carolina as his birthplace but whose French descent was in every move and gesture; Walter Wyman, who as surgeon-general was responsible for much of the efficiency of the Public Health Service; Gustav Baumgarten, one of the first practitioners of the state to achieve modern scientific medicine; J. K. Bauduy, whose command of language was the wonder of his friends; Walter B. Dorsett, achieving a high position in a too short life; William G. Moore, whose words came as from lips of honey; Jesse S. Myer, the most promising young man in the profession; Joseph C. Mulhall, easily the foremost laryngologist of his time in this portion of America; Frank J. Lutz, always in the forefront of medical organization; James Pleasant Parker, who virtually gave up his life to establish the Annals of Ophthalmology and Otology; C. H. Hughes, the debonnaire; A. V. L. Brokaw, pioneer in radiography, and W. E. Fischel, I. N. Love, G. C. Crandall, J. P. Bryson, Hugo Summa, A. B. Sloan, J. E. Tefft, J. W. Trader, L. Bremer, W. P. King, T. F. Prewitt, John M. Richmond, W. C. Glasgow, and a host of others whose names have adorned the profession of Missouri.

I might continue this catalogue of medical men who have brought credit to their profession during the past hundred years, in fact, I am sure that many have been omitted who are quite as deserving of mention as those whom I have recalled. Furthermore, there are many belonging to this category who cannot be included as they are still happily in the work. As we leave them, let us study for a few moments the institutions which they brought forth.

The two medical schools which were founded in the early forties remained for a quarter of a century the only medical colleges in the state with the exception of the Humboldt Medical College, which, after a few years, gave up its pedagogic ghost. In 1869 a college was organized in Kansas City and during the twenty-five years succeeding this the founding of a medical college was such an easy and pleasant process that it was indulged in *ad libitum*. Medical college establishment followed, during these



years, well known laws of evolution. From the old medical college tree a branch would start another medical school, and the branchlet would follow the same process until the parent institution could not longer be recognized in the development of its progeny. In this quarter of a century upward of twenty-five medical colleges were incorporated, all private institutions. I would not have you think that the men responsible for this remarkable fecundity were recreant to their obligation as medical men or that they had improper motives in this activity. They were, in the main, seriously interested in their work and were enthusiastic and zealous in their aims and efforts. And, after all, there was not so much difference in the medical and perhaps pedagogic ability of the professors and those who were perforce outside of the professorial field and who, except for the wonderful fertility of American laws of incorporation, would never have been able to partake of the succulent pabulum on which the professors were feeding. Be this as it may, they lived their day, have performed their earthly function, good or bad, and now three institutions, adherent to the universities, are called on to train such students in medicine as come to the state of Missouri for that purpose.

The hospitals, too, have been greatly changed since the first Sisters' Hospital was started nearly a hundred years ago. The private hospital is being gradually evolved into a public institution, or at least it is doing more and more public work and is becoming more and more dependent on public support and direction.

Coincidentally the profession of nursing has grown with that of medicine, evidenced not only by the large number of self-sacrificing women who have accepted the call of humanity, but also by the extension of the field of usefulness which is widening day by day.

This brings me to the conclusion of my theme—the public work of the physicians of Missouri for the past hundred years. It would be vain to attempt an enumeration of what the profession has done in this regard, for our medical men have always been in the forefront when they were needed. Witness their untiring devotion to the free institutions of the state, their willing self-sacrifice in epidemics, more especially that of cholera in 1849, when nearly 5,000 died from this scourge, and of yellow fever in 1878 and 1879. Missouri physicians served in the war of 1812 and in the Mexican War. They were divided in their allegiance during the Civil War, but they were always on the side of humanity, whatever flag waved over them.

And today they are again serving under the flag of their country and humanity. One-sixth

of the entire profession of Missouri have volunteered their services, constituting fully one-half of those available for duty. All honor to these men who are fulfilling the hundred year old traditions of the medical profession of Missouri and who are risking their lives to care for the men who have entered this terrible struggle to make an abiding place for free men in every land.

Humboldt Building.

#### ADDRESS OF RETIRING PRESIDENT\*

ELSWORTH S. SMITH, M.D.  
ST. LOUIS

Just one year ago tonight, on accepting the highest honor within the gift of the medical profession of this great city, we did so recalling the weighty responsibility linked with the office, especially in the midst of the greatest military conflict within the history of the human race. And on that solemn occasion we said:

"Coming as we do with absolutely free hand you may rest assured that we shall bring and dedicate to the task the best that is within us to the end, that with the cooperation of our fellow officers and members the best interests of our organization may be completely conserved in an honest effort for a clean administration, in order that we may each and every one of us do the more effectively his bit in the attainment of that most desired of all goals and which every true American feels must be reached at all hazards and which is the winning of the war."

A pledge which we have strained every nerve and sinew to redeem but with what success it would, of course, ill become us here to attempt to define. Suffice it to say that we have endeavored constantly and faithfully to approach our so desired goal through the route which appeared to us the most direct and effective, viz., through energetic cooperation with the Medical Section, Council of National Defense, as represented in this our state of Missouri, by its state and county committees.

Through these avenues, then, have we operated conscientiously and unceasingly in all their various activities. And to realize how spontaneously patriotic has been the response of our society to the Medical Section, Council of National Defense, we have but to cast our eyes on this galaxy of 317 loyal sons, who have been serving under the Stars and Stripes, at the bedside of the sick and wounded, either at the front or here at home, and how fitting it is that this one star should differ from the others in

\* Read before the St. Louis Medical Society, January 4, 1919.

being of bright gold, for while we shall ever mourn the loss of the only one of our members as yet called on for the supreme sacrifice, yet shall we always join in all glory and praise to our youthful member, Dr. J. Louis Swarts, none the less the hero, because of succumbing to disease in fighting disease, amid his fellow soldiers on this side of the Atlantic, clad in the uniform of his country.

However, those of us less fortunate because compelled to remain here at home, either by reason of physical defects, indispensability as teachers of medicine, or for other equally valid reasons, have also made every effort to cooperate with the military movements to the fullest possible extent. Our membership furnished the personnel for the various advisory and local draft boards, whose patriotic and effective work all over our country was such a factor in the mobilization of our Army. Then, too, our organization at once placed at the disposal of the St. Louis Auxiliary Medical Defense Committee our records to assist thereby the work of the committee. Our society also furnished the personnel of a committee, with Dr. Willard Bartlett as first chairman, succeeded by your humble president ex-officio, which committee had in charge the removal of remedial defects in draft registrants and through its efforts many an otherwise defective soldier was placed in active military service.

This same committee also took charge of an arrangement whereby those of our members, compelled for valid reasons to remain at home, volunteered to care for the patients of their fellow members during their absence in the service of their country, while reserving at the same time a liberal portion of the earnings thereby accruing to be credited to the accounts of their brethren thus absent in the service, together with the pledge to exert every effort to have such patients place themselves again in the hands of their own physicians on the return of their former medical advisors from the war work, and in this way were our members enabled to leave their clientele with the assurance of not only not losing many of their patients, but also of actually retaining a goodly portion of their professional earnings accumulating at home during their absence. Then, too, the demands of the Red Cross Society, during the year on our body were unusually heavy, because of the increased number requiring aid due to war conditions, while so many of our members were compelled at the same time to discontinue their Red Cross work because of entering service—yet our society rallied also to this situation, conscientiously and manfully responding to nearly 300 calls. Such are some of the war problems that the administration has had to meet. But we had also a problem arising within our ranks which had for some-

time threatened the very existence of our organization. We refer to the business bureau, a department of our society which had been founded under a previous administration, and which had come to us in an unsound financial state and more than this which we discovered through legal consultation to have been operating not within the powers of our charter and having thereby constantly jeopardized our aforesaid charter. Whereupon we at once took steps to close said bureau which was forthwith accomplished against merely a feeble opposition of a very small minority of our membership after the enforced liquidation by our society of a large indebtedness which had been progressively increasing and in the foreclosure and liquidation of which lay the only safety for our very charter, as well as for the financial status of our society. In the final adjudication of this matter, we feel that our society owes a lasting debt of gratitude to Attorney Charles W. Bates, whose able opinion, furnished most cheerfully and entirely gratis, formed the basis and the guide for our entire action in the matter. And finally did our organization have to face the influenza epidemic by which we were, of course, greatly handicapped, having as a consequence to omit some of our regular meetings and in having the attendance at the meetings held during this period greatly reduced through the professional demands on the physicians being so great as to monopolize their every moment of time. But this situation was also calmly and effectively met by our body through every cooperation and assistance, being extended by our members to the health commissioner in his most able, praiseworthy and successful efforts in controlling this treacherously fatal scourge. And so in spite of all the above enumerated serious obstacles, we are now happy to state our organization has successfully weathered the storm. While at the same time the scientific phase of our work has been kept well up to the mark, with the good fortune also of having several prominent out of town physicians address us on topics of vital interest, notwithstanding the tremendous war demands on the time of the medical profession generally.

But while thus compelled to meet all the above enumerated taxations on our energy and finances, we nevertheless close our year with but only a comparatively small deficit, notwithstanding the unusual disbursements and the great loss of revenue incident to the remitting of the dues of our members going into the service. This showing, however, of course, could never have been accomplished without the unswerving cooperation and valuable assistance accorded your president by the members of his official family, his committees, and the great majority of the members themselves, and to all



these does he now desire to express his heart-felt gratitude and thanks.

And so, Mr. President, we are now prepared to turn over to you the keys of office with the hope that you will find that the trust committed to our care has been preserved intact, through an administration, fraught with all the dire possibilities of a world's war and pestilence, and to be now by you carried through the stages of reconstruction and renaissance.

Coming as you did, a comparative stranger from our neighborly lakeshore city, you have in the course of only a few years through your ability, untiring energy, and uniform courtesy of manner, so endeared yourself to your medical brethren that your election to the presidency of this, the representative medical body of this great metropolis, was as natural as it was happy, and so, Mr. President, we feel we could turn over the reins of state to no one better fitted through upright character and medical culture to preside over the destinies of our organization for the ensuing year. For now that the horrible world war has been brought to so glorious a conclusion, our medical brethren will be returning from the various military posts, filled with new and valuable scientific experiences and discoveries, in fact, the whole medical scientific world is about to have an awakening. And your able guidance will certainly be a great inspiration for renewed and successful scientific efforts during the ensuing fiscal year, in which we assure you that you can depend on the hearty cooperation of your numerous and devoted medical friends.

It affords us the keenest pleasure to present to you our worthy successor, Dr. William Engelbach, president of the St. Louis Medical Society.

Humboldt Building.

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#### INAUGURAL ADDRESS OF THE PRESIDENT\*

WILLIAM ENGELBACH, M.D.  
ST. LOUIS

The expression of keen appreciation for the honor conferred in being chosen the presiding officer of your society for the following year carries with it very rare responsibilities and unusual obligations; responsibilities accruing to the rapid advance allotted to an aggressive year of reconstruction; obligations furnished by a fraternal and civic pride to project the purposes of our society, so that St. Louis be kept apace medically with its other civic achievements.

The book entitled, "St. Louis After the War," issued last year by the City-Plans Commission,

was an advance agent of our civic responsibility in this reconstructive program. Its recommendations of the adoption of an \$89,000,000 bond issue for the execution of plans for the betterment of the community, applying to the general public welfare, is a concrete illustration of the early trend of public events, not only in this, but in all our large municipalities. Responding to the order of the President of May 11, 1918, the Natural Research Council, through its committee on reconstruction, made a study of after-war construction problems. These included the placing of war workers under changing conditions, and of human effort where it may be most effective. It indicates the better use of all our natural resources, and consequently includes, above all, the science for which our organization stands, as applied to the betterment of the individual as well as the public.

The eight-one years of specialized service which this society has voluntarily given this city and section has engraved many illustrious names on its roll of honor. During these eight decades this society has been a dominating influence for progressive improvement of public health, and the most stimulating impetus of organized medicine of the Middle West. Notable among these productive years was the one of the outgoing administration for its splendid work of maintaining a well directed and efficient organization during the very trying period of war and pestilence. The society's cooperation with the health department, as evidenced in the control of the recent epidemic of so-called influenza, saving many thousands of lives, is only an incident in the year's accomplishments.

Of the most worthy mention, of which the society should feel particularly proud, is its recent war record. The service flag, with its hundreds of stars, among which is one star of gold, testifies to the early noble, patriotic response to its country's call. An analysis of these services is as follows: (1) Three hundred and seventeen members of this society engaged in active military service, among whom were two ex-presidents who volunteered, as well as many members of the acting councilors and officers, comprising in all 40 per cent. of our total membership in active service; (2) 310 members of the Volunteer Medical Corps gave their service for war and epidemic work in this and other cities; (3) 235 members of this society were actively engaged in government work at home as members of advisory and local draft boards. The above record assures us of the society's willingness to assume its part in the forth war obligation, that of the reconstruction and the rehabilitation of disabled soldiers returning from the war.

It is impossible to sense the many problems which may confront the society during the year;

\* Read before the St. Louis Medical Society, Jan. 4, 1919.

therefore only those issues demanding immediate consideration will be presented at this time. As inopportune as is this occasion for the discussion of things pecuniary, the first urgent necessity that presents itself to the new electorate is the liquidation of a deficit. The relief from payment of annual dues of the men in active military service and other legitimate expense are responsible for this deficit. This discussion is inserted here in order to excite immediate action, to efface this debt before our active military service members return. The chairman takes the privilege of advancing this one idea for the consideration of the society, that the members who have not made the immense sacrifice of entering active service should voluntarily provide means of an immediate liquidation of this indebtedness. Surely it would be a shame and a disgrace on those members of the society who have remained at home to permit those who have been in active service to help pay any society deficit incurred during their absence. The least and only honorable stand the members who have remained at home can take is to return to our honored service members this society free from debt, efficiently organized, and capable of solving all the problems pressing it for solution.

The next most important subject for the society's consideration is that of the medical library. As you all know, our wonderfully rich, rare collection of medical literature has outgrown its present quarters. No provision has been made for its rapid growth and increasing demand for maintenance. Space at the present time is almost unavailable for the number of books and periodicals accumulating from month to month. Ways and means to gradually extend space, equipment, and maintenance must be provided.

Other direct society responsibilities are those that pertain to membership, hospital organization, and public health. The membership of this society has not increased in proportion to the growing number of physicians in the city. At the present time the active membership totals 867; members who have not paid their dues, 24; the membership in good standing, 843. A perusal of the total number of physicians in the city of St. Louis, obtained from the American Medical Association directory, demonstrates that there are 1,732 enrolled, and 1,300 of these signed the pledge of the Volunteer Medical Service Corps. There are almost 1,000 physicians practicing in our section who are not members of this society. Yet an estimate of the average of new members added each year is only fifty. It should be the object of each member, as well as that of the membership committee, to see that every qualified physician in St. Louis be urged to join this organization. The council would appreciate a yearly

report from the membership committee, of the total number of physicians not members of the society, and the reasons therefor. Your committee on hospitals should also be actively engaged during the following year. The plan of the "College of Surgeons" to energetically re-enter the field of hospital inspection and rating directs attention to the necessity of more thought to the organization of our hospitals. What committee should be better qualified to provide them with proper information for making these investigations? St. Louis has been accused of having two standards of hospitals: (1) The closed hospital, efficiently organized and fully equipped so as to give the most expert service to the patient, but inaccessible to the general medical profession; (2) the open hospital, less effectively organized, partially equipped, and consequently not capable of giving the best service to the profession or the public, but many accessible to the irregular, as well as the regular medical profession. Our problem deals mainly with the latter. The influence of this society should be directed toward raising the standard of these hospitals to the level of the highest efficient service to the public. Each member of this society can aid in the solution of this task. In fact, the initial inspiration for hospital organization must come from the physician himself, who must both demand and give efficient service.

The reconstructive stage through which the city and state is to pass during the next few years will place your committee on public health and legislation in a very responsible position. A complete revision of civic hygiene and public health matters, as detailed in sewerage, garbage disposal, housing, hospital extension, etc., as considered in the plans of the city commission, should receive the attention of this committee, and through it the approbation of this society. Questions pertaining to state, as well as federal legislation, governing medical practice, will undoubtedly assume prominence. The regular profession of the state of California has been busily engaged during the past year trying to repeal laws which had been passed by that state legalizing "social medicine." The compensation act to be introduced in our legislature convening tomorrow must be given immediate consideration. The indifference to the passage, and later the reformation of similar laws in neighboring states have cost organized medicine years of persistent effort.

With a feeling of sincerest deference, a few other medical relationships, pertaining to some questionable criticisms of members of regular medicine from other cities and sections, impersonally suggest themselves for the good of medical St. Louis and for the betterment of the society. This is the year of opportunity, when cooperation for the projection of scientific medi-



cine and advancement of local medical organization, free from internal dissension, is predominant. It is just such circumstances which, without intention of personal or gross reflection, will permit the mention of some of the accusations registered against us by those outside our own medical circle. Some of those referring to the relationship of the medical profession of this city to our outside confrères have undoubtedly been heard, and sufficiently refuted by many members of our society. For illustration, our profession, not individuals, not groups, not special members of this society, but it seems the entire profession as an organization, has for some unexplained reason been suspected of being neglectful of the proper participation in the spirit of medical progress of the Middle West. As an illustration is cited a journal, the *Medical Clinics of North America*, of which Johns Hopkins, the clinics of Philadelphia, New York, Boston, and Chicago issue regular numbers, and a Southern number, made up jointly from such sized cities as Memphis, New Orleans, Nashville, Norfolk, Birmingham, Columbia, Charleston, and Atlanta, are represented. Yet it is pointed out that St. Louis, with its wonderful clinical facilities, has not yet sought to enter this field of publication. Another instance frequently presented for refutation is our lack of open clinics. No doubt many have heard the common complaint made by visiting physicians of this scarcity, as compared with other towns less pretentious in their medical attainments. Comment has been made on the scarcity of St. Louis representation on the programs of national, state, and section society meetings. Local hospital organization, and even our society organization, have been criticized for the lack of adaptation to the proper reception of visiting members of our fraternity, even of those living in the near vicinity. It is a question whether these subjects really come under the domain of the proceedings of this society. Whether true or false, some of them, however, could best be dealt with through the channels of organized medicine. The only purpose of their introduction is to direct our efforts to the early correction of such false impressions. It is to be hoped that the prevailing spirit of cooperation, with the individual help of each member of this society, will aid to overcome this alleged indifference, or, if you will, the natural medical modesty with which some of our fraternity consider us afflicted. Let us all unite to create and maintain an attractive medical reputation abroad and the most inviting medical hospitality at home.

This leads us to the final subject, which we hope will overcome and displace some of the minor difficulties which have been sketched above; that is, the great year of medical reconstruction facing the society. Undoubtedly, our members in active military service, who have

had the chance of exchanging ideas with the best medical men of all countries; who have had opportunities of being taught in many of the notable institutions of learning here and abroad; who have had the wonderful experience of actual application of the most recent advances in the cantonments, hospitals, laboratories, and operating rooms of the world, will return to us surcharged with medical ideas which will be a rejuvenating influence for the entire society. It will be our opportunity to receive them, sit at their feet, and be instructed by assimilating the newer ideas which they have gathered from this unusual practice and research. The reorganization of medical instruction, research, and clinical medicine in general will undoubtedly be activated by the quickening influence of this military training.

In conclusion, let us impart one personal message to the members of this, your society. Our progress depends, not on the activity of your officers, but on the constant interest of the individual members of the society. No matter what their intentions may be, your administrative force is merely working with you and at your command. Your chairman, guided by the judicious judgment of your council, advised by members of your special committees and by other officers, sincerely solicits the personal cooperation of each member of the society. Let us hope that, with the aid of every individual member, we may keep on the crest of the wave of the reconstructive year, and that the St. Louis Medical Society will leap "to the front" of medical usefulness and service.

University Club Building.

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#### DUAL PERFORATIONS OF THE STOMACH FROM GASTRIC ULCER

E. H. KESSLER, M.D.  
ST. LOUIS

Gastric ulcer is not uncommon. Multiple ulcers of the stomach are often seen. Perforated multiple ulcers are not of common occurrence.

Gastric ulcer may be a mere mucous slit—this, of course, in the early stages. Later we may find a callous ulcer with a deep crater, or carcinoma engrafted on the ulcer edges.

Shortly after the ulcer onset Nature attempts to make a repair. This attempted repair causes a deformity. This deformity permits us to make a positive roentgen-ray diagnosis. The deformity is an actual anatomical defect and is permanent. Where the progressive ulcer destruction has gone on in the stomach without an adhesion of the outer stomach wall becoming attached, the crater or niche may be of connective tissue only.

The niche was first shown by Reiche<sup>1</sup> and later by Haudek.<sup>2</sup> This inflammatory process in the stomach wall may cause the stomach to become attached to the organs touching it, most frequently the liver and pancreas. If perforated into the liver there will be motion with breathing. If the pancreas is invaded there is no motion. In any case of perforation mobility is lessened and pain is fairly constant and acute.

Previous gastric disturbances will have been noticed from one to twenty years. Francis J. Scully,<sup>3</sup> in a large series of cases, found the symptoms in the largest number of patients examined having lasted from one to five years.

There are no special premonitory symptoms of perforation. Indigestion might have been no worse than usual and pain no more acute than is experienced in other gastric disorders.



Perforated ulcers of the stomach.

Some blood might have been vomited, but pain is most constant. If rupture takes place without a previous stomach attachment, death is from shock or peritonitis.

Gastric and duodenal ulcers occur in the same stomach in 15 per cent. of cases, according to Carman. In his work Carman shows two ulcers in the same stomach.

The following case has several points of interest. It was referred because of constant pains in the stomach region:

Mr. W., aged 67, has complained of pains in the stomach for three years. Two years ago he was told he had cancer. During the past year the pains were mostly over the liver region. Has lost some weight. Has good color. Eating causes most pain about twenty minutes after taking food and is most acute for about one hour. Does not vomit, is not constipated and he has never seen blood in the stools. Greatest discomfort is a feeling of a weight in the pit of the stomach.

Under the fluoroscope is seen no hindrance to swallowing. First few swallows causes the stomach to bisect itself about midway. Immediately the barium is seen to run along the lesser curvature and into a niche or pouch outside the regular stomach wall. The upper sack empties quickly. While the lower sack is filling, a second niche is seen to fill prepyloric. Palpation shows lessened mobility of the stomach. Tumor masses cannot be felt on account of rigid belly wall. On repeated tests this stomach emptied in less than three hours. The roentgenogram shows the arrows pointing to the perforated ulcers.

3446 Shenandoah Avenue.

## AN APPEAL FOR NATIONAL MEDICAL RECIPROCITY

*Camouflage* is the name of a semimonthly magazine that was published by the medical officers at the United States Army Base Hospital at Camp Wheeler and was edited by one of our members, Lieut. John O'Connell of St. Louis. In the February number of the magazine we find a plea to permit medical officers of the Army to practice in any state without undergoing an examination by the medical examining board. The article follows:

"In the interest of the morale of the medical officers who have been left in the service since the signing of the armistice and as an act of simple justice to all medical men who have abandoned their work in civil life to serve in the Army during the war, an effort should be made through the governors of the several states or otherwise to secure for the ones who are graduates of reputable medical colleges and who have made good records, the right to practice in any state in the Union without examinations. This suggestion is supported by the following:

"(a) The object of all medical practice laws is to protect the public from ignorant and vicious practitioners of medicine. No state law regulating the practice of medicine is passed on any other theory, nor for any other purpose. The graduates of reputable medical schools selected for army service and especially those who have made good records in the Army meet all of the requirements demanded by all state laws governing the practice of medicine.

"(b) Practically all states grant to medical men in the Army and Navy the right to practice in civil communities while in the service. If these men meet the requirements while in the Army and Navy, they certainly meet the requirements when retired to civil life.

"(c) Many medical men have been made proficient in special branches of medicine during the war and should be given opportunity to select new locations in which to begin practice as specialists.

"(d) Some men have, in addition to the loss of civil practices, been broken in health and will find it necessary to begin work again in different climates and environments.

"(e) Many having lost their practices at home will find it easier to begin life all over again in new localities. This is particularly true of those who have been much reduced in financial standing. They should be spared the humiliation of having to begin at the bottom and to compete on unequal terms with old competitors who have profited by their absence from home.

"(f) The last men to be released from the service will be the most in need of encouragement and help in every possible way. During the war they were regarded by their patients as patriotic men making sacrifices during a great national emergency. Now that the war is over they are thought to be remaining in the Army as a matter of choice and are therefore more often censured than praised. The men first out of service will very naturally get the best of whatever practice is recovered by the returning medical officers."

1. Reiche, F.: Fortschr. a. d. Geb. d. Röntgenstrahlen, 1909.

2. Haudek, M.: München. med. Wchnschr., 1910.

3. Am. Med. Sc., 1918.



# THE JOURNAL

OF THE

## Missouri State Medical Association

APRIL, 1919

### EDITORIALS

#### STATUS OF BILLS IN THE LEGISLATURE

On February 27 a bill was introduced in the house of representatives by Dr. Speer of Bollinger County which if enacted would destroy every existing legal method of controlling the equipment of medical colleges in Missouri. The bill is House Bill No. 859 and amends the medical practice act by striking out the word "reputable" in Section 8,313 and substituting therefor the words "legally chartered." By this substitution of words the State Board of Health would be compelled to examine the applicants of any medical college that held a legal charter irrespective of the character, quality and quantity of equipment the college possessed or of the reputability of its staff and methods of graduating of students. The bill further amends the present act by omitting certain words in the premedical educational qualifications which would further lower the standards of medical education in Missouri, but the principal object sought by the sponsors of the bill is to remove the power which the State Board of Health now possess and ought to possess of establishing the minimum requirements that a medical school must meet in order to be regarded as reputable.

The house committee held a hearing on the bill but at this writing no report has been made by the committee. Those who attended the hearing to protest against the passage of the bill are: Drs. William Englebach, president St. Louis Medical Society; J. J. Singer, St. Louis Tuberculosis Society; Malcolm Bliss, Washington University Medical School; Walter McNabb Miller, secretary State Tuberculosis Society; L. P. H. Bahrenburg, United States Public Health Service; A. G. Pohlman, St. Louis University School of Medicine; D. M. Shoemaker, St. Louis University School of Medicine; E. H. Bullock, Health Commissioner of Kansas City; H. DeLamater, Health Commissioner of St. Joseph; W. A. Clark, president, Missouri State Board of Health; W. J. Ferguson, vice president, Missouri State Board of Health; T. W. Cotton, Van Buren, and T. A. Son, Bonne Terre, members of the State Board of Health.

This measure should be strongly condemned by the members of the organization throughout

the state and letters should be sent to the representatives protesting against the passage of House Bill 859.

The other bills that we are opposing have made little progress and we do not believe any of them will become laws. Our members should, however, keep themselves informed through their representatives of the status of these bills and continually remind the legislators of their objection to the bills. The dangerous period in the house of representatives has just been developed for the house has appointed a committee to select bills from the calendars in blocks of twenty to be given preference for engrossment and passage. At such a time it is very easy to include a measure that we are opposing and pass it in the rush of clearing the calendar. The present status of the bills is as follows:

House Bill 122 (workmen's compensation) has been passed with the inclusion of the free choice of physician by the injured employee and exclusive state insurance. In the senate the bill is still being discussed in the committee.

House Bill 295 (the optometry bill) was reported favorably and is on the calendar for engrossment. In the senate this measure (Senate Bill 209) was reported unfavorably.

House Bill 302 (requiring physicians to file death certificates within twenty-four hours after the death of the patient) was reported unfavorably on March 24. In the senate (Senate Bill 244) this bill was engrossed before the physicians had an opportunity to protest against its passage. We do not think the senate will pass it.

House Bill 360 (the chiropractic bill) is in the committee on criminal jurisprudence. This committee is undecided what to do with the measure. It has been reported that the committee contemplates amending the bill so as to require applicants in chiropractic to obtain a license from either the State Board of Osteopathy or the State Board of Health. In the senate (Senate Bill 232) this bill has been reported unfavorably.

House Bill 859 (described above).

House Bill 905 (limiting fees physicians may charge to \$1.50 a call, \$1 in the office and \$10 for any obstetric case) is in the committee on public health. In the senate no companion bill has been introduced.

House Bill 909 (writing prescriptions in English) is in the committee on public health. In the senate (Senate Bill 662) this measure has been reported unfavorably.

Senate Bill 663 (placing on surgeons the burden of proof that due care had been exercised in operations when the surgeon is sued for malpractice) is in the committee on eleemosynary institutions.

The following bills have been indorsed by the association:

House Bill 298 (reporting venereal diseases) has been engrossed and is on the calendar for final passage. In the senate (Senate Bill 425) it is on the informal calendar for engrossment.

House Bill 711 (reorganizing the state board of health and increasing their power to control communicable diseases) has been reported favorably by the committee and is on the calendar for engrossment. In the senate (Senate Bill 676) the bill has been reported favorably and is on the calendar for engrossment.

House Bill 712 (establishing regulations under the state board of health for analysis of water supply) has been reported favorably in both the house and the senate (Senate Bill 677).

## THE EXCELSIOR SPRINGS MEETING

Interest in the sixty-second annual meeting of the association which will be held at Excelsior Springs, May 26 to 28, is very general throughout the state and the indications point to a very large attendance. The sessions will be held in the Elms Hotel which will also be headquarters. The preliminary program for the scientific session is announced on another page.

With the return of so many of our members from active service in the military forces of the country there will be great interest not only in the scientific proceedings but in the other sessions an opportunity will be afforded for listening to the experiences of the members in actual war conditions.

The committee of arrangements at Excelsior Springs consists of the following: Drs. J. E. Baird, chairman; H. J. Clark, E. C. Robichaux.

The principal hotels at Excelsior Springs are the Elms Hotel, headquarters; Snapp Hotel and Royal Hotel. The rates for accommodation will be published in our next issue. In the meantime any members who desire information about the accommodations at Excelsior Springs or any other question pertaining to the local arrangements should address the chairman of the local committee of arrangements so the committee can give his request careful attention.

## IODEX

According to *Pharmaceutical Advance*, a "house organ" extolling the products exploited by Menley and James, "There is no therapeutic virtue in Iodex which is not inherent—though often latent—in free iodine; and there is no virtue in free iodine which is not available in iodex." This publication further declares: "In

iodex all the beneficent properties of iodine are emphasized and all its disadvantages are eliminated—in a word, iodex is pure free iodine presented therapeutically active and efficient, ready for use in all conditions, with all the well known powers of free iodine, but without the sequelae of unpleasant effects, as irritation, corrosion, desquamation, staining, etc., which defeat the ends of treatment when ordinary preparations of iodine are used."

The claim that a given proprietary represents all the desirable therapeutic properties of a well known drug but none of the equally well known drawbacks, has been so often proven unwarranted that the preceding claims for iodex should receive scant consideration from the medical profession. If, however, any of our readers want to know more about iodex we suggest that they read the report on this preparation which was published by the American Medical Association Council on Pharmacy and Chemistry.<sup>1</sup> This report<sup>2</sup> includes an analysis of iodex, made in the American Medical Association chemical laboratory, which shows that iodex, despite the advertising claims, contains no free iodine; to be exact, when a test for free iodine was made on five specimens, four yielded only minute traces of iodine while the fifth yielded none.

## OBITUARY

### JOSEPH L. HOGAN, M.D.

Dr. Joseph L. Hogan of Oregon, Mo., a graduate of the Ensworth Medical College, St. Joseph, 1909, died in a hospital at St. Joseph, March, 12, 1919, following an operation, aged 35 years. Dr. Hogan was a member of the Holt County Medical Society, the State Medical Association and a Fellow of the American Association. Among his surviving relatives are two brothers who are physicians, Dr. Frank E. Hogan of Bigelow, Mo., and Dr. Leo Hogan of the Medical Corps of the Army.

### EDMUND NASSE, M.D.

Dr. Edmund Nasse of Hermann, a graduate of the St. Louis Medical College, now Washington University Medical School, 1881, died at his home, Feb. 10, 1919, from pneumonia, aged 61. He was a son of Dr. August Nasse of Hermann and was born and obtained his early education in that city. After his graduation in medicine he located in Santa Fe, N. M., where he established a drug store but returned to

1. Jour. A. M. A., June 19, 1915, p. 2085.

2. A copy of the report on iodex may be obtained by sending a stamped, addressed envelope to the secretary of the council, W. A. Puckner, 535 N. Dearborn St., Chicago, Ill.



Hermann a few years later and became one of the town's most prominent physicians. He seemed to possess a restless spirit which lured him from place to place, so later he located in Washington, Mo., and when the Oklahoma district was opened he joined the army of pioneers who located at Kingfisher. This venture did not advance his progress so he returned to Missouri and made his home in Sedalia, where he established a large drug business. After a few years he gave up this activity and moved to Wellington, Mo., where he practiced for the past nine years. He finally returned to Hermann and to scenes of his youth and first successes to spend his declining years among his former friends.

Dr. Nasse was a talented physician and a gentleman of scholarly accomplishments and possessed all the qualities of the true physician. He was honored and respected by his fellow physicians and the members of the Gasconade-Maries-Osage County Medical Society of which he was a member.

#### ALONZO H. MACKEY, M.D.

Dr. Alonzo H. Mackey of Gorin, Scotland County, a graduate of the College of Physicians and Surgeons, Keokuk, Iowa, 1878, was instantly killed by a Santa Fe train striking his automobile at a grade crossing in his home town, March 7.

Dr. Mackey enjoyed a large practice and had the confidence and respect of his people and of the Scotland County Medical Society of which he was a member. He was County Health Commissioner up to the first of this year and was tireless in his efforts in enforcing the health laws of the state. He was 63 years of age at the time of his death and leaves a son and brother to mourn his loss.

The president of the Scotland County Medical Society appointed a committee who drafted the following resolutions:

WHEREAS, It has pleased our Heavenly Father to suddenly remove from our community our beloved member, Dr. Alonzo H. Mackey; therefore be it

*Resolved*, That we deeply deplore the death of our member and co-worker; and be it further

*Resolved*, That in his death the community has lost one of its most faithful and energetic workers, the medical profession one of its loyal and respected members; and be it further

*Resolved*, That in token of the esteem and friendship which we have for our fellow-member these resolutions be spread on the minutes of our society, that a copy be sent to the local papers of the county to THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION and to the son of Dr. Mackey.

P. M. BAKER, M.D.

E. E. PARRISH, M.D.

F. M. JOHNSON, M.D.

#### LUTHER I. MATTHEWS, M.D.

Dr. L. I. Matthews of Joplin, a graduate of the University of Michigan Medical School, Ann Arbor, 1866, died at his home Nov. 5, 1918, aged 80 years. Dr. Matthews settled in Carthage, Jasper County, in 1871 and practiced in that city for twenty-two years when he moved to Joplin, in the same county, where he remained until his death. About nine years ago he retired from active practice largely on account of failing health. During his active career he was a very ardent supporter of the ideals of the profession and when the movement to organize the physicians was started in 1902 he was one of the principal supporters of the plan in his district. He served the society and the State Medical Association in many ways and was elected to various positions of honor and trust in the organization, being president of the State Medical Association in 1889. He was a member of the Grand Army of the Republic and the funeral services were conducted by that order. The following resolutions were adopted by the Jasper County Medical Society:

WHEREAS, Death having removed from our midst Dr. L. I. Matthews, one of the best known and esteemed members of our profession, a man standing always for the highest ideals, taking an active part in medical organization, being elected president in the 1889 session of the Missouri State Medical Association; and

WHEREAS, In his death the younger members have lost one of their most sympathetic friends and counselors and the profession at large one of its most loyal and respected members; therefore be it

*Resolved*, That as a mark of our respect and in token of our esteem these resolutions be incorporated in the minutes of the Jasper County Medical Society and that a copy be sent to the *State Journal* and to his bereaved family.

W. H. LANYON, M.D.

J. A. CHENOWETH, M.D.

A. BENSON CLARK, M.D.

*Committee.*

#### GEORGE W. PETTY, M.D.

Dr. George W. Petty was born in Lancaster, Garrard County, Ky., Oct. 14, 1850, and died Dec. 22, 1918, at his home in Nevada, Mo., aged 68 years, 2 months, 8 days, from bronchopneumonia complicated with edema. He was a graduate of Franklin Institute, Ky., class of 1864, and in 1890 he graduated from the Kansas City Medical College. In 1899, on account of ill health, he moved to Arizona and passed the examination before the state board permitting him to practice medicine while he sojourned there. Later, having recovered his health, he returned to Metz, Mo. From there he went to Chicago and took a postgraduate course in the Polyclinic. Dr. Petty began his career at Metz, in Vernon County, Mo., in

1886. In 1905 he moved to Nevada where he practiced his profession until God, whom he revered and worshipped, called him home. He was a member of the Vernon County Medical Society and served as its president in 1912. He was also a member of the Missouri State Medical Association. He was the official registrar of vital statistics for Center, Washington and Badger Townships, also city health officer. Be it said in memory of him, that he was one of the most conscientious and efficient city officials that has ever served the people. He was a very active and helpful member of the Independent Order of Odd Fellows and last, but not least, a devout member of the Methodist Episcopal Church (South), responsive to the call of duty and his obligations as a true Christian gentleman. Dr. Petty was a man of pleasing personality, of even, hopeful disposition, an ethical gentleman, a most excellent and capable physician. One of the fundamental characteristics of this good man's life was his spirit to care for the poor, the oppressed and distressed. Well does the writer remember the night before the day he was stricken with his last illness when he was asked to visit with him, a very poor man, one without home or money but sick unto death with the same disease which caused the death of our much beloved friend. Then again the next day, while he too lay on his sick bed, he turned his face towards me and said, "There is a family in the west end of town, father, mother, and three children, all down with the 'flu.' The boy is dangerously ill. I want you to go and see them for me. Will you do it?" The answer was yes. They too were very poor but this good Samaritan's heart reached out after them. Such a life was none other than the exemplification of the life of his Lord and Master.

Dr. G. W. Petty was a man of firm conviction, unwavering in his tenets. He stood for the principles of civic righteousness. He was thoroughly dependable. Much more should be said about this good man but space forbids. We will conclude by quoting Cato's soliloquy:

"Plato, thou reasonest well;

Else whence this pleasing hope, this fond desire,  
This longing after immortality?  
Or whence this secret dread and inward horror  
Of falling into naught? Why shrinks the soul  
Back on itself, and startles at destruction?  
'Tis the divinity that stirs within us."

We saw him lying cold in death, and on his lips

"The spoiler had set the seal of silence.  
But there beamed a smile,  
So fixed, so holy, from that manly brow,  
Death gazed and left it there.  
He dared not steal  
The signet ring of Heaven."

WHEREAS, Death has taken our brother and colleague, Dr. G. W. Petty, and we shall very greatly miss his counsel and pleasant companionship; and,

WHEREAS, The community has suffered a great loss, his family bereft of a kind and loving husband and father; therefore be it

*Resolved*, That the members of the Vernon County Medical Society extend to the bereaved family their sincere and heartfelt sympathies in this hour of sorrow; and be it further

*Resolved*, That a copy of these resolutions be presented to the family; that they be published in the *Daily Mail*, and in THE JOURNAL OF THE MISSOURI MEDICAL ASSOCIATION, and be spread on the minutes of our society.

I. W. AMERMAN, M.D.

GEORGE WILLSON, M.D.

H. W. LANCASTER, M.D.

## NEWS NOTES

THE Texas legislature has refused to pass the optometry bill.

LIEUT. JOHN O'CONNELL of St. Louis passed through that city March 15 on his way to Base Hospital No. 26 at Fort Des Moines, Ia.

DR. M. F. ENGMAN of St. Louis was a guest of the Chicago Medical Society Feb. 26, 1919, and read a paper entitled "The Skin a Mirror to the System."

DR. ALONZO H. MACKEY of Gorin, Scotland County, was instantly killed, March 7, by a Santa Fe train striking his automobile at a grade crossing in Gorin.

MRS. M. P. OVERHOLSER, wife of Dr. M. P. Overholser, president of the Missouri State Medical Association, died March 3 of septic endocarditis following pneumonia.

GOVERNOR Gardner has appointed Dr. J. M. Yater of Nevada a member of the board of managers of State Hospital No. 3 to take the place of Mr. W. M. Bowker, elected state senator for the district.

DR. G. CANBY ROBINSON of St. Louis, associate Professor of Medicine and acting dean of Washington University Medical School, has been elected dean of the medical school.

DR. J. A. FUSON of Mansfield, secretary of Wright-Douglas County Medical Society, was the victim of a very severe attack of influenza and spent a period of recuperation at Hot Springs, Ark., during March.



THE next meeting of the Missouri State Board of Health to examine applicants for license to practice medicine in Missouri will be held in St. Louis, June 9, 10 and 11, at the St. Louis University School of Medicine.

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THE private secretary of Dr. E. W. Saunders of St. Louis, a woman who has been in his service since 1911, has confessed to having "borrowed" about \$16,000 of the doctor's money in the past three years, without his knowledge.

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MAJOR WALTER FISCHER of St. Louis has been promoted to the rank of lieutenant-colonel. Colonel Fischer has been in Europe since May, 1917, attached to Base Hospital No. 21, which was organized by Washington University Medical School.

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DR. E. HAYDN TROWBRIDGE of Kansas City, whose school for nervous and backward children was formerly located in the suburbs of Kansas City, has moved his school from the country to Kansas City, with offices at 929 Rialto Building.

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MAJOR M. G. SEELIG of St. Louis, who was a member of the staff of the surgeon-general at Washington during most of his service in the Medical Corps of the Army, has been promoted to the rank of colonel in the Medical Reserve Corps, since his discharge from the service.

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FOR the first time in its history women students of medicine will be admitted to the New York University and Bellevue Hospital Medical College. The women students will be received on the same basis as the men and will be accorded the full privileges of the classes.

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PRESS dispatches announce that the residuary estate of Dr. Horace Fletcher, the expert on dietetics who died recently, is left to Harvard University, the income to be used to foster knowledge of healthful nutrition; and a provision is made for prizes to be known as the Horace Fletcher Prize for theses on certain phases of nutrition.

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THE infant mortality rate of St. Louis has been lower than that of any other large city for the past several years, but in 1918 New York City reduced her infant death rate to 91.7 while St. Louis had a rate of 94.4 and took second place. Baltimore was the highest in the list of ten large cities, having a death rate of 147.7, while the death rate for Chicago was 131.3.

THE alumni of Washington University met at a banquet in St. Louis March 1 and listened to talks by several alumni who had served in the military forces during the war. Washington University had 365 men commissioned in the Army and Navy, a large number of whom were members of the medical corps.

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SINCE 1913 when radium was first produced in the United States the radium output of the Standard Chemical Company of Pittsburgh, has been 39 radium element grams, we are told in *Science*. The total radium production in this country up to 1919 approximates 55 grams of radium, which represents probably more than half of all the radium produced in the world.

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THE Missouri Officer's Association is the name of an organization recently formed for the purpose of perpetuating an association of army officers from Missouri who served during the recent war. It is an outgrowth of Fort Sheridan and Fort Riley Association. All medical officers in Missouri who desire to affiliate should address the Missouri Officer's Association, 304 Rialto Building, St. Louis, Mo.

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A STATEMENT from the War Department announces that the casualties among American medical officers in France from the time of the arrival of the first units to March 13, numbers 442. There were 46 killed in action; 22 died of wounds; 12 died of accident and other causes; 38 taken prisoners; 212 wounded in action. According to the best information we have at command ten Missouri physicians died in the service.

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THE Buchanan County Medical Society has indorsed the administration of Dr. Porter E. Williams, superintendent of State Hospital No. 2 at St. Joseph, and congratulated Governor Gardner on the appointment of Dr. Williams. The society also indorsed the work of Dr. H. DeLamater, city health officer, and Dr. Daniel Morton, member of the social welfare board, and petitioned the mayor of St. Joseph to reappoint them.

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DR. ARTHUR GUNDLACH of St. Louis, who was secretary of the St. Louis Medical Society when he accepted a commission in the Medical Corps of the Army, has returned home, having been honorably discharged from the Army. Dr. A. F. Koetter was elected secretary when Dr. Gundlach entered military service but on Dr. Gundlach's return Dr. Koetter resigned the position and the council elected Dr. Gundlach secretary of the society.

THE Missionary Centenary of the Methodist Episcopal Church is to be commemorated by a movement to raise \$105,000,000 for world reconstruction from which will be appropriated \$2,288,624 for the construction and maintenance of forty-five new hospitals and twenty-four dispensaries in foreign lands under the direction of the church. The church now has twenty-six hospitals in foreign countries and forty-eight in the United States, the latter valued at over \$15,000,000.

It is reported that the base hospital unit from Missouri—the Washington University Medical School Unit No. 21 and the Christian Church Hospital Unit of Kansas City No. 28—have been ordered to return home from France. This will probably mean the release of all the physicians who are members of the units. They are expected to reach the United States sometime in April. A few of the members of the staffs of both units have already been released and honorably discharged.

DR. HANAU W. LOEB, dean of the Medical School of the St. Louis University, is one of the administrators of the large estate of the late John T. Miliken, millionaire chemist who died recently, has found the duties imposed on him so numerous that the school has appointed Dr. D. R. Joseph, professor of physiology, assistant dean. Dr. Joseph is now serving in the Medical Corps of the Army with the rank of major, but it is expected that he will receive his discharge at an early date and return to his duties at the university.

WE have been unfortunate in accepting as correct information the statement from various sources that some of our members had received their discharges and were at home. This is particularly true of Dr. C. A. Smith of Osceola and Dr. John O'Connell of St. Louis, who are still in the service. We shall continue taking this information from *The Journal of the American Medical Association* and from other sources when the information can be substantiated. We request our members who are in the service to notify us promptly when they receive their discharge and give us their permanent address so our records may be accurate.

C. L. ALSBERG, chief of the Bureau of Chemistry, U. S. Department of Agriculture; John Howland, professor of pediatrics, Johns Hopkins University, Department of Medicine, and Henry Kraemer, professor of pharmacognosy, University of Michigan, College of Pharmacy, have been reappointed to serve on the Council on Pharmacy and Chemistry of the American

Medical Association for a further period of five years. W. W. Palmer, associate professor of medicine at the College of Physicians and Surgeons of Columbia University, has been selected to fill the vacancy caused by the death of Prof. J. H. Long, Northwestern University, who had been a member of the council since its organization.

THE executive committee of the State Medical Association recently adopted resolutions calling on the governor to compel boards of managers of state institutions and departments, if such action should be necessary, to restore to their former positions physicians who were employees of the state when they accepted commissions in the Medical Corps of the military forces of the country during the war with Germany. In most instances these physicians have been restored to their positions when they returned home with honorable discharges. The board of managers of the State Sanatorium for Incipient Tuberculosis has refused to reinstate Dr. F. W. Shaw, who entered the service as lieutenant, rose to the rank of major and was honorably discharged.

THE New York Academy of Medicine and the New York Bureau of Municipal Research will establish a practical training course in public health administration conducted jointly by the two agencies. The course will cover a period of six weeks beginning April 30, 1919. This course is intended to make it possible for the busy health executive to come in contact with the leaders of public health thought and action in the United States and through such contact to acquire, for use in his own work, new ideas and new enthusiasm. It is not intended that this course shall compete in any way with the already established courses in public health offered by special schools, but rather that it shall bridge the gulf between the educational opportunity afforded health executives by the annual meeting of the American Public Health Association, and the long courses of training offered by the special schools.

IN celebration of the twenty-fifth anniversary of their graduation the class of 1894 of the Kansas City Medical College held a reunion dinner at Kansas City on March 23. Addresses were delivered by Dr. George C. Mosher, Dr. Charles H. Lester and Dr. Joseph Sharp of Kansas City, all former members of the faculty of the college. Dr. O. C. Thomas of Springhill, Kan., was elected president of the class and Dr. Tom Fields of Kansas City, Mo., secretary.

The class of 1895 of the same college will hold its twenty-fifth anniversary dinner in



March, next year. If the plans as at present contemplated are carried through the class will invite all the alumni of the college and the members of the faculty to be the guests of the class, according to Dr. Howard Hill of Kansas City, who is a member of the class of 1895.

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"ULTRA-VIOLET RAYS IN MODERN DERMATOLOGY," is the title of a little book which is apparently an amplified catalogue of the Alpine Sun Lamp and the Kromayer Lamp, with illustrations supplied by the manufacturers of these instruments, the Hanovia Chemical and Manufacturing Company. It is written by the author of "Solidified Carbon-Dioxide Snow in the Successful Treatment of Cutaneous Neoplasms and Other Skin Diseases," a booklet which was published in 1912 by the selling agents of the Goosmann Crayon (carbon-dioxid) apparatus. Both ultra-violet light and carbon-dioxid snow are valuable therapeutic agents in combating a certain but limited number of cutaneous diseases, but "cure alls" in dermatology are as rare as in other branches of medicine. It is unfortunate that the confidence of the medical profession in a really worthy therapeutic appliance should be weakened by the publication of literature of this character, and it is an imposition to ask anyone to pay real money for a lamp catalogue.

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THE St. Louis Medical Society has appointed a committee to organize the clinics in St. Louis with the view of correlating the clinical material of the city for the purpose of establishing a method of announcing the work to be done in each clinic from day to day in order that the local profession and visiting physicians may have better opportunity to observe the work done by St. Louis physicians. It is proposed to form an organization that will furnish a central bureau of information concerning the schedule of cases so that a physician who desires to see some work in a particular branch of medicine can be directed to the clinic without delay. The following members have been appointed chairmen of committees in each of the branches mentioned: Charles H. Neilson, medicine; John R. Caulk, genito-urinary; Jules M. Brady, pediatrics; Harvey S. McKay, surgery; William W. Graves, Neurology; William E. Sauer, nose and throat; Fred J. Taussig, gynecology and obstetrics; Edward H. Higbee, Jr., eye; Archer O'Reilly, orthopedics.

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MAY, 1920, will again witness the assembling in Washington of the delegates to the United States Pharmacopoeial Convention. It is desirable at this time that pharamcists, physicians, chemists, botanists, biological experts, or any others who use the U. S. P. IX should submit

to the chairman of the revision committee either personally or through associations, such helpful information as their experience may have suggested, or which may have come to their attention. These suggestions will be compiled systematically and circularized to the present revision committee, the authors being credited in each instance with the recommendations, and the compilation will be submitted to the 1920 convention for the benefit of the new committee of revision. It is requested that in sending in suggestions the special form be employed. As many forms as are desired will be mailed on request. Further information and blank forms may be obtained from Charles H. LaWall, chairman of the Committee of Revision of the United States Pharmacopoeia, 39 South Tenth Street, Philadelphia, Pa.

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THE government reconstruction hospital at St. Louis will probably be completed and ready for occupancy by the injured soldiers on April 1. The building taken over by the government is the one formerly used by the city of St. Louis for housing the infirm and decrepit who have become charges on the city's bounty. These unfortunates have been transferred to the commodious building and grounds formerly occupied by the Christian Brothers College which the city has purchased. The buildings were partially destroyed by fire some months ago, but have been rebuilt. The task of moving the inmates, numbering about 550 persons, was accomplished without mishap. The government has spent about \$700,000 in remodeling and equipping the building to be occupied by the wounded soldiers. A staff of about forty-five army surgeons and eighty nurses will be assigned to the institution which has been constructed to accommodate about 1,000 patients. The equipment will be thorough and complete in every respect and rival the best equipped institution of the kind now under control of the Medical Department of the Army. Major Fred W. Bailey of St. Louis, a member of the St. Louis Medical Society, has charge of the surgical division of the hospital.

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THE Volunteer Medical Service Corps was dissolved on April 1, according to an announcement by Dr. Edward P. Davis, president of the corps, who says that the Council of National Defense under which body the Volunteer Medical Service Corps was organized asked that the activity of the corps be terminated. At the final meeting of the central governing board of the corps, held in Washington on March 14, Dr. Davis paid a tribute to the patriotism of civilian physicians. Applications for membership in the corps were received from 70,000 physicians. There were over 3,700 applicants from Missouri. The report of Dr.

Davis states that about 13,000 applications for membership in the corps which had been received among those filed before the armistice was signed on Nov. 11, 1918, could not be acted on previous to the dissolution of the corps and to them the president of the corps sent a letter of explanation and appreciation for their offer of service. Surgeon-General Ireland of the Army has requested that the records of the corps be placed in the Library of the Surgeon-General of the Army, and this will be done.

DR. F. T. VAN EMAN of Kansas City, president of the Jackson County Medical Society, has appointed an editorial committee for the *Weekly Bulletin* of the society, whose duty will be to arouse greater interest among the members through the society bulletin in all matters affecting the progress of medicine and the improvement of public health. President Van Eman freely acknowledges that hospital conditions are "far from ideal," but he says, "Kansas City has become a large city and promises much for the future, the near future. Our hospitals are now ranking with those of other cities and the work done here compares favorably with that done elsewhere, therefore, it seems that the time is now here when we should abandon forever the 'every man for himself' idea and proceed along much broader lines, standardizing our work and our hospitals and taking a place on the medical map to which we will then be justly entitled. It is hoped and desired that the editorial staff will at once enter actively on a campaign which will ultimately bring about such a change as above mentioned. This is one of the primary reasons for the appointment of such a staff. Not only this, but many other matters need attention and readjustment—the nursing situation; prenatal care; better babies; child-welfare; the education of the people to demand better obstetric service and appreciate its value; the value of expert medical service as compared to surgical, and the relation of the medical profession to national, state and civic affairs. Thus it will be seen that each member of the editorial staff of our bulletin has accepted a position of marked responsibility, but your president feels confident that he has made no error in his selections." The editorial committee consists of Drs. Scott P. Child, chairman; George C. Mosher, Robert McE. Schauffler, Frank C. Neff, Harold P. Kuhn, all of Kansas City.

WITH the approaching drive for the Fifth Liberty Loan the war loan organizations are making urgent appeals for the people to put the "Victory Loan over the top." It is only natural that there should be a recession of enthusiasm for such undertakings at this time,

but everyone should remember that the war expenses have not yet been paid and that it is far better to invest money in interest bearing bonds so the government may have funds than to be heavily burdened with taxes, no part of which is returned to the tax payer. The publicity committee of the war loan organization for the Eighth Reserve Federal District with headquarters at St. Louis has issued a statement declaring that German propaganda is still directed toward the destruction of the spirit that has so strongly supported the government in all movements to encourage the growth of Americanism. The article states that although "the grass of one summer has not grown on the American graves in the Argonne the pro-German in America is trying to kill the Fifth Loan and leave our government without the necessary resources to impose its terms on the Hun. He is whispering in trains and street cars, in cross roads stores and on street corners, wild and foolish stories of extravagance and waste, of needless bloodshed, and a thousand and one tales, baseless, vicious, morbid, all told with the idea of cooling American fervor, belittling American patriotism and making men loth to support the American government when every man's support is needed."

We must accept the statements of those who are in position to know the facts and not be turned aside from our determination of giving the government every possible aid within our power. The real peace that is to come must come through American help. "England alone cannot make sure of a real peace. Aided by France she cannot give the world what it is hoping for. The strength of America is necessary to bring this to pass. Every German knows this. He understands that with America out of the coalition it would be possible to start that old diplomatic move that might better things for Germany. So the obvious thing for the German in America to do is to strike at the first opportunity that offers itself and that is the Fifth or 'Victory Loan.' That would weaken America's power as no other one thing would. It would indicate that the common people of America and the great financial power of the United States were no longer back of the American government."

Buy Victory Bonds.

## MEMBERSHIP CHANGES

### NEW MEMBERS

Berger, Harry C., Kansas City.  
Bohrer, Harry C., St. Louis.  
Brown, John A., Belgique.  
Burlingham, Louis H., St. Louis.  
Chambliss, Edward L., Kansas City.  
Coon, James W., Springfield.  
Ferguson, R. E., Elmo.



Hansen, Walter Joseph, St. Joseph.  
 Hennerich, Joseph P., Jr., St. Louis.  
 Kearby, Howard Denton, St. Joseph.  
 Kloeppel, Carl F., St. Joseph.  
 Moore, Sherwood, St. Louis.  
 Rising, Dean S., Kansas City.  
 Schnoebelen, Paul C., St. Louis.  
 Smith, Arthur J., Boonville.  
 Standley, Joseph Perry, St. Joseph.  
 Taylor, Harry O., Whitewater.  
 Vickrey, Aden C., St. Louis.

## CHANGES OF ADDRESS

Ball, J. E., State Hospital No. 2, St. Joseph, to 4917 College Ave., Kansas City.

Barken, Leo, 1700 N. Union, St. Louis, to 1491 Laurel.

Bassett, Charles W., 1027 Railway Exchange Bldg., St. Louis, to 219 Lister Bldg.

Bertram, C. W., Physicians and Surgeons Bldg., St. Joseph, to Room 1 Commercial Bldg.

Brewington, G. F., Bevier to Keota.

Bryan, William M. C., Humboldt Bldg., St. Louis, to 910 University Club Bldg.

Cavalier, John Paul, Tyrone to Elk Creek.

Chipp, Joseph K., New Hampton to 407 Bartlett Bldg., St. Joseph.

Clemens, J. R., 4915 Argyle Ave., St. Louis, to 4616 Pershing Ave.

Cohen, O. T., Marquand to Fredericktown.

Cook, Emmett, 710½ Felix St., St. Joseph, to Physicians and Surgeons Bldg.

Cuppaidge, Godfrey O., Moberly to Brunswick.

Davis, H. B., 2200 E. Thirty-First St., Kansas City, to Barnhart.

Douglass, William H., Benton City to 3867 Flad Ave., St. Louis.

Dyer, Clyde P., 614 Century Bldg., St. Louis, to 233 Metropolitan Bldg.

Edmondson, M. T., Fair Grove to 200 E. Commercial St., Springfield.

Foster, William H., 4065a Chouteau Ave., St. Louis, to 4139 Chouteau Ave.

Garner, K. C., Crosstown to Perryville.

Gauen, George Otto, 5064 Maple Ave., St. Louis, to 3636a Pestalozzi.

Graham, I. E., 4542 Page, St. Louis, to 5530 Etzel.

Grindon, Joseph, 3894 Washington Blvd., St. Louis, to Lister Bldg.

Hale, Tyre H., 5755 Easton, St. Louis, to 5801a Easton.

Hans, Willard J., 4532 Virginia Ave., St. Louis, to 700 Kingshighway.

Hayward, J. D., 1321 Goodfellow, St. Louis, to 5560 Maple St.

Henson, L. L., West Eminence to Ash Grove.

Higdon, E. E., Allenville to Morley.

Hogeboom, R. W., Frisco Hospital, Springfield, to Holland Bldg.

Joiner, George W., Lawton, Okla., to Holister, Okla.

Kneale, E. Ellsworth, Infectious Disease Hospital, St. Louis, to City Infirmary.

Langley, J. W., Peculiar to Granby.

Lutz, A. L., 1623 Lafayette, St. Louis, to 2416 Lafayette.

Mankopf, Bert E., New Haven to 305 Grand Ave., Memphis, Mo.

McCubbin, J. Burleigh, Laddonia to Fulton.

Mestemacher, Louis, 1704 N. Union, St. Louis, to 2903 Barrett.

Morfit, John C., 3534 Washington Ave., St. Louis, to 333 University Club Bldg.

Nevins, James A., North Salem to Hale.

Nixon, J. H., 745 E. Elm St., Springfield, to 801 Weller Ave.

Parker, Frederick P., 1514 W. Euclid, St. Louis, to 314 Times Bldg.

Parrish, S. M., Smithton to Fayette.

Peden, S. E., 5558a Etzel, St. Louis, to 1109 N. Grand.

Piles, Thomas C., Thayer to Midco.

Poe, J. D., 6131 Easton, St. Louis, to 1506 Hodiamont.

Potter, Ambrose E., Springfield, R. R. No. 5, to Bois D'Arc.

Randle, H. T., 253 Field Bldg., St. Louis, to 1014 Mississippi Ave., Lawrence, Kan.

Rice, William, 626 Lathrop Bldg., Kansas City, to 1120 Rialto Bldg.

Schwarz, Otto H., 6047 Pershing Ave., St. Louis, to 4947 Laclede Ave.

Senor, Samuel D., Lincoln Bldg., St. Joseph, to 2699 Mitchell Ave.

Settle, Francis B., U. S. Marine Hospital, St. Louis, to Mayo Clinic, Rochester, Minn.

Shaw, Frederick W., Fort Leavenworth, Kan., to Mt. Vernon, Mo.

Smith, Clinton K., Lathrop Bldg., Kansas City, to 1334 Rialto Bldg.

Smith, Seth P., 2286 Clarence Ave., St. Louis, to 4500 Clarence.

Stone, Edna A., 4901 Page, St. Louis, to Grand and Washington.

Strickler, Olinda A., 3552a Florissant, St. Louis, to 4033a W. Florissant.

Summa, Henry H., 5703 Florissant, St. Louis, to 4236 W. Florissant.

Taussig, Albert E., 727 Metropolitan Bldg., St. Louis, to 515 Wall Bldg.

Thompson, H. A., West Plains to Lanton.

Van Eman, Fred T., 801 Rialto Bldg., Kansas City, to 907 Rialto Bldg.

Vaughn, Samuel C., New Franklin has moved and left no address.

Witten, H. O., State Hospital No. 2, St. Joseph, to 5337 Prospect Ave., Kansas City.

Woolis, Asa L., Galesburg, Ill., to Alliance, Neb.

Wright, C. G., 1059a Forest, St. Louis, to 55 Union St., Oberlin, Ohio.

Wright, Gordon D., 1916 Olive St., St. Joseph, to 845 S. Nineteenth St.

Wunnicke, August C., Drexel to 2327 Troost Ave., Kansas City.

#### TRANSFERRED

Hoefer, Edward August, Missouri Valley, Iowa, from Linn County Medical Society to Iowa State Medical Society.

Norman, Joseph B., Riley, Kan.; from Moniteau County Medical Society to Riley County, Kan., Medical Society.

Squibb, Harry W., Quapaw, Okla., from Polk County Medical Society to Ottawa County Medical Society, Okla.

#### DROPPED

Atherton, Mary J., Junction City, Kan.

Guyot, J. De Voine, Bucklin.

Witmer, C. M., Marble Hill.

#### RESIGNED

Clark, J. P., Perryville.

Poston, Charles P., Bonne Terre.

#### DECEASED

Mackey, Alonzo H., Gorin.

Meyer, A. G., Ste. Genevieve.

Nasse, Edmund, Hermann.

Ward, Thomas J., Birmingham.

## CORRESPONDENCE

### PHYSICIAN NEEDED AT MOUNDVILLE

*To the Editor:*—We are badly in need of a good physician at this place and we write this to kindly ask you if you can lend us any assistance in getting a good man.

We have the most attractive location with all the practice one good man and an automobile can do.

Collections will run more than 98 per cent.

The climate is delightful, the country lies level and is very beautiful.

Yours truly,

W. H. McCaffree,

Cashier, Moundville State Bank.

### ON THE RHINE

A letter from Lieut. C. E. Hyndman of St. Louis, chairman of the defense committee of our association, who is now in charge of the fracture work and orthopedic surgery at Evacuation Hospital No. 30 with the Army of Occupation in Germany, may prove interesting to

our readers. Dr. Hyndman has received orders to return home since the letter was written. The letter follows:

MAYEN, GERMANY, Feb. 18, 1919.

At last I am here in the front row. We arrived here about 10 p. m. last night after a hard trip of five days and four nights on the train without a break. Much of the time was put in on side tracks and waiting for change of engines, etc. Troop trains are second to supplies now. After four nights of sleeping in every manner of cramped position you may well guess we were glad to get stretched out last night even if it was in a tent. We were too late to be billeted around in the night but the tent was very comfortable. Today we were assigned to billets in the town. Lieutenant Doyle and I have a very nice pair of rooms in the home of a baker. From Nevers we went across to Dijon, then up to Isle-sur-Tille, where we had to lay over most of a day. This is second largest quartermaster headquarters in the A. E. F. It is a mammoth place. Looks like the terminal yards at home with miles and miles of cars and supplies of every sort. Several thousand soldiers are stationed there. It is entirely American and laid down on what was open field. From here on up to the front was camp after camp of S. O. S. and soldiers thick as blackbirds. Everything is American. They have taken control of everything and are doing and making everything. We went on up into Neuchateau then to Commercy, passing just a few miles west of Toul. At Commercy we began to see the real effects of war. We traveled on up and arrived at St. Mihiel after dark. It was a sight. Absolutely destroyed; evidently not a house left. Not a light in the town. Two human beings were there, the railroad stationmaster and a railroad watchman. We got out and looked it over as best we could at night. Everything was razed to the ground. Then we rode on through the battlefield with its trenches and dugouts, camouflaged roads, etc., to Verdun. We did not get into the city, which is entirely destroyed above ground, but where still about 25,000 soldiers live under the ground. The train stopped several times to let us get out onto the battlefield around the city and to peep into the dugouts; it is just like a prairie dog village blown to pieces by shells. It must have been hell. We passed on up through the German dugouts, trenches, barbed wire entanglements, etc., then through Hindenburg's line and the back trenches. It is a sight one can hardly conceive. Towns absolutely destroyed along the way. We laid over at Audun le Roman near the Lorraine border not far from Metz. The Germans had taken this four years ago and because they were fired on they dynamited the entire town except the railroad station and one or two buildings they used themselves. Every house blown up. There are three families living there now. A large engineer company (American) is stationed there to clean up the railroad yards. We passed through Sorcy where the Twelfth Engineers were for a long time (maybe still are) but I did not see any one I knew around the station. Then we went through Thionville, Treves, Cochem and up the Moselle Valley, which is absolutely marvelous. Acres and acres of vineyards covering the mountains on either side clear to the top. We landed in Coblenz and then here to Mayen about 14 miles out. The trains are run by Germans with American soldiers convoy. No German soldiers to be seen and the civilians seem to be glad we are here. Their treatment is very courteous. Our hospital is a big German hospital with about 550 patients. There are many thousand American troops here and they indeed have occupied the place. Everything is on a strictly military basis.



## MISCELLANY

### DOCTORS ON THE FIGHTING LINE

The medical department of the United States Army and Navy has again made a great record in patriotism and efficiency. A general call upon it in a supreme national crisis that came suddenly has met with an amply satisfactory response. It has also been, more notably than ever, a heroic response. Though works of mercy call the doctors to the field the shifting tides of battle often expose them to the most serious personal dangers. In an army driven back by a heavy general onslaught there is no place of safety in the immediate rear where the wounded are gathered and the surgeons and their assistants are busy to the limit. In a retiring mass of men the flying shells and the bullets make no discrimination. The official figures just published of Medical Corps casualties of the American forces in the war are significant. The lists foot up 442, of whom no less than 68 were killed or died of wounds. Disease, often of a contagious nature, carried off 101, 12 died by accident, 4 were lost at sea, 7 were missing in action and probably killed and 38 had the hard fortune to be taken prisoners. The wounded in action numbered 212.

This is a remarkable exhibit of devoted service. History will do justice to the high manly courage and spirit of self-sacrifice. Along with the wretched physical suffering in the trenches came one of the most destructive and distressing epidemics the world has ever known. It put an extraordinary strain on the medical fraternity everywhere. They have met the ordeal ably and unflinchingly. Not yet can their scientific achievements in the war be set forth, but the showing will be of permanent value when it appears.

How much the doctors contributed to the victory is not yet fully appreciated because not known. But the completed story will be memorable.—*St. Louis Globe-Democrat*.

### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY

Ayars, T. R., St. Louis; Althans, C. J., St. Louis. Barrymore, E., Silex; Bertram, C. W., St. Joseph; Blakesley, T. S., Kansas City; Brandon, W. L., Broseley; Brewster, R. B., Kansas City; Briggs, G. C., St. Louis.

Carpenter, E. H., Helena; Coleman, H. T., Pattonville; Colley, E. A., St. Joseph; Cuppaidge, Godfrey O., Brunswick.

Davis, B., St. Louis; Delzell, W. A., Springfield; Dewey, J. E., Springfield; Duckworth, W. H., Sedalia; Duke, W. W., Kansas City.

Edens, L. M., Cabool; Ellis, R. V., Norwood.

Ferris, J. L., St. Louis; Fleischman, J. C., St. Louis. Gaines, G. W., Rayville; Gayler, W. C., St. Louis; Gettinger, A. J., St. Louis.

Hardesty, J. F., Winfield; Haworth, D. B., Kansas City; Hines, W. H., Kansas City; Hogan, W. G. Neck City; Hughes, M. R., St. Louis.

Johansen, F. A., Kahoka; Johnson, R. W., St. Louis.

Kearney, E. F., Oregon; Koogler, J. F., Kansas City; Krebs, F. J. V., St. Louis; Kuhn, H. P., Kansas City.

Lea, J. A., Kansas City; Lichtenberg, J. S., Kansas City; Longsway, Maurice, St. Louis; Luman, Frank E., Baring; Lynch, J. C., Kansas City.

Margulis, A. A., St. Louis; May, H. A., Washington; McAlester, Andrew W., Jr., Kansas City; McBride, W. L., Kansas City; Megee, C. P., Hartsburg; Middlebrook, R., Jr., Kansas City; Miller, G. H., St.

Louis; Middleton, J., Kansas City; Minton, W. H., St. Joseph; Moore, Neil S., St. Louis; Morfit, John C., St. Louis; Muench, O. L., Washington; Murphy, E. S., St. Louis.

Nelson, W. L., St. Louis; Netherton, E. W., Galatin.

Olson, H. H., Kansas City; Owens, R. J., Leeper.

Parmenter, C. G., Kansas City; Pfeffer, F. J., St. Louis.

Raithel, G. Herman, St. Louis; Rowlett, H. S., Maryville; Ruhl, I. E., Kansas City.

Sauer, William E., St. Louis; Say, W. J., St. Louis; Sayre, R. W., Bernie; Scrivener, D. S., Pleasant Hill; Seelig, M. G., St. Louis; Simmons, C. C., Bunker; Simon, F. C., St. Louis.

Thompson, J. C., St. Louis; Thurman, J. L., St. Louis; Tonelli, G. L., St. Louis; Tooker, Charles W., St. Louis.

Van Meter, E. R., St. Louis; Vernon, W. C., Kansas City; Vieregg, F. R., Kansas City.

Walker, W. E., Lamonte; Watkins, G. L., Farmington; Wilson, R. E., La Belle.

York, W. B., St. Louis; Young, A. O., St. Louis.

### WORLD RED CROSS PLANS TRIUMPH OVER HUMAN ILLS AND DISEASE

Thirty days after peace shall have been declared by the momentous conference now reshaping the world's destinies at Versailles, delegates from the Red Cross organizations of the world will assemble at Geneva for the purpose of considering the program to be submitted by the committee now working at Cannes, France—a program the fulfillment of which should go a long way toward promoting that future harmony among the nations that the peace makers are hoping for. No denying the first requisite to contentment in an individual or a people is good health and as the promotion of good health the world over is the chief objective of the Red Cross plan the important relation of the latter to the future peace of the world at once becomes apparent.

With the deliberations of the peace council at an end, the attention of the world will be shifted to the Geneva congress, and prayers for the success of the greatest humanitarian program of all time will rise from the hearts of the hoping millions. This program is being prepared by representatives of the Red Cross societies of the five remaining great powers, the chairman of the committee in charge of this gigantic task being Henry P. Davison of New York, whose genius in directing the tremendous activities of the War Council of the American Red Cross enabled the latter organization to achieve a record which has won world admiration. Mr. Davison, at the request of President Wilson, who is president of the American Red Cross, has agreed to represent the latter organization in the movement for unification of Red Cross effort. His selection to head the committee at Cannes is a graceful tribute to the American people whose generosity is recognized the world over as having made possible the achievements of their Red Cross.

Leading experts in public health, tuberculosis, hygiene, sanitation and child welfare work from all parts of the world are now in Cannes or on their way there, summoned to help the committee prepare the plans which will be submitted at Geneva. Measures for handling problems of world relief emergencies will, as a matter of course, have a large share of the program, but much of the effort will be directed not only toward relieving human suffering and distress but towards preventing it.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1919

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Dec. 14, 1918.  
Webster County Medical Society, Dec. 23, 1918.  
Cedar County Medical Society, Dec. 30, 1918.  
Pike County Medical Society, Jan. 8, 1919.  
Vernon County Medical Society, Jan. 20, 1919.  
Chariton County Medical Society, Jan. 25, 1919.  
Wayne County Medical Society, Feb. 12, 1919.  
Camden County Medical Society, Feb. 14, 1919.  
Atchinson County Medical Society, Feb. 26, 1919.  
Ralls County Medical Society, Feb. 27, 1919.  
Ste. Genevieve County Medical Society, Feb. 27, 1919.

### MISSOURI STATE MEDICAL ASSOCIATION

Sixty-Second Annual Session, Excelsior  
Springs, May 26-28

#### PRELIMINARY PROGRAM

M. O. Biggs, Superintendent, State Hospital No. 1, Fulton: Title to come. P. G. Bohan, Kansas City: Extra Cardiac Causes in Angina Pectoris. E. H. Kessler, St. Louis: Plea for the Early Recognition of Stomach Malignancy, with lantern slide illustrations. D. S. Booth, St. Louis: Syphilis in the Etiology of Epilepsy. Cyrus E. Burford, St. Louis: Ureteral Calculi. Logan Clendening, Kansas City: The Mechanics of Fluids in the Pleural Cavity. J. B. Cowherd, Kansas City: Children's Diseases. O. B. Hall, Warrensburg: Title to be announced. J. G. Hayden, Kansas City: Title to be announced. Roland Hill, St. Louis: Congenital Pyloric Stenosis. E. B. Knerr, Kansas City: Title to be announced. T. F. Lockwood, Butler: Hysteria—Its Diagnosis, Prognosis and Treatment. J. J. Link, St. Louis: Pseudo-Appendicitis. J. C. Lyter, St. Louis: Cardiovascular Diseases in the Army. Hermon S. Major, Fulton, State Hospital No. 1: The Work of the Neuro-Psychiatrist in the Army Camps. M. W. Pickard, Kansas City: Emergency Surgical Work. A. G. Pohlman, St. Louis: Title to be announced. Caryl Potter, St. Joseph: Congenital Pyloric Stenosis, Pylorospasm and Chronic Appendicitis. B. A. Poorman, Kansas City: Conservative Surgery of the Pelvic Organs. Francis Reder, St. Louis: Nerve Suture with Special Reference to Injuries of the Musculo-Spiral Nerve. Llewellyn Sale, St. Louis: The Epidemic of Influenza in France. R. E. Schlueter, St. Louis: Choice of Operation for Inguinal Hernia. J. W. Sherer, Kansas City: Neuro-Retinitis (Choked Disk) Sequel to Thyroid Extirpation; Report of a Case. Carroll Smith, St. Louis: Treatment of Hemorrhoids. Elsworth Smith, St. Louis: Further Observations on the Role of the Vasomotor Response in the Cardiac and Renal Decompensation of Hypertensive Cardiovascular Renal Disease. Wm. K. Trimble, Kansas City: Title to be announced. R. S. Vitt, St. Louis: Safety Appliances and Accident Prevention. G. W. Vogt, St. Louis: Cesarean Section with Hysterectomy. F. E. Wilhelm, Kansas City: Obstetrics.

The program committee is endeavoring to arrange for a special session at which our members who served in the military forces will be invited to give a description of their experiences in the war.

The complete program will appear in the May issue of THE JOURNAL.

### ST. LOUIS MEDICAL SOCIETY

Meeting of the Council, Jan. 8, 1919

The meeting was called to order at 8:45 p. m., by the chairman, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

Dr. Hardy reported for the membership committee recommending the following for active membership, all of whom were elected: Emil Boehm, 715 North Eighth Street; Frank J. Stanze, 604½ Chestnut Street; George A. Mellies, 2917 St. Louis Avenue; Heber B. DePew, 241 South Jefferson Avenue; Charles M. Yaley, 2828 Franklin Avenue; Elmer D. Howe, 306 Humboldt Building; Clark E. Baker, 311 Third National Bank Building; Henry R. Backhusen, 2854 Keokuk Street.

The applications of Drs. Frank L. Morse, Florence H. Bullis, J. C. Heinrichs, I. C. McIntire, O. D. Meyer, Richard Phelan, Emma Phelan and J. M. Bradley were referred back to the membership for further investigation. The applications of Drs. S. J. King and M. G. Breed were referred back to the membership committee to secure the original signatures of the sponsors.

Dr. Engelbach reported for the program committee, stating that the program was filled up to March 8, that Col. W. O. Owen would be the guest of the society on January 11, and that Prof. Charles P. Emerson of the State University of Indiana would be the guest of the society on February 15, to deliver an address on the subject of "Headache."

Dr. Murphy presented a report of the receipts and expenditures for the month, which was adopted by the council.

Dr. Tupper reported for the ways and means committee, stating that the ways and means for overcoming the year's deficit had been taken over by the council and general society by its attempt to enlarge the present patriotic fund, through the appointment of a large committee, to obtain voluntary subscriptions from the members of the society who have not been in active military service.

It was moved that the ruling, that all delinquent members be automatically dropped, be enforced and the members notified to that effect.

Plans for organization for the following year were considered as follows: The chair proposed the advisability of notifying Dr. Bliss of the fact that he was still a member of the council, about which there seemed to be some doubt in his mind since his service in the Army.

It was moved that he be notified of his present status as that of an active councilor.

On motion the president and secretary were appointed as a special committee to express to the Hon. Charles W. Bates the appreciation of the society for the very valuable legal service rendered free of charge during the past year.

Councilors present: Drs. Bliss, Boisliniere, Falk, Funkhouser, Gayler, Graves, Hamel, Reder, Schisler, Smith, Tupper, Engelbach and Koetter.

Councilors absent: Dr. Engman.

Visitors present: Drs. Hardy and Murphy.

ALBERT F. KOETTER, M.D., Secretary.

### Meeting of the General Society, Feb. 15, 1919

The meeting was called to order at 8:45 p. m. by the president, Dr. Wm. Engelbach. The minutes of the previous meeting were read and approved.

Dr. Elsworth S. Smith introduced the guest of the evening, Prof. Charles P. Emerson, dean of the University of Indiana, Indianapolis, who addressed the Society on the subject of "Headache."

Discussion by Drs. Charles H. Neilson and Malcolm A. Bliss; Professor Emerson closing.

Dr. Holdenreid asked permission of the Society for Mr. Conrad Paeben to discuss House Bill No. 581, which is now before the legislature.



The privilege was extended Mr. Paeben, who explained the bill, which provides for the organization and incorporation of physicians, surgeons and dentists mutual indemnity association.

Discussion by Dr. Elsworth S. Smith.

Attendance 120.

HUDSON TALBOTT, M.D.,  
Secretary pro tem.

### Meeting of March 1, 1919

The meeting was called to order at 8:45 p. m., by the president, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following: "Base Hospital No. 21—In France," by Dr. Arthur W. Proetz.

Discussion by Drs. M. A. Bliss and M. B. Titterington.

On motion a vote of thanks was extended Dr. Proetz for the splendid pictures shown.

"Base Hospital—United States," by Dr. Robert E. Schlueter.

Discussion by Dr. Henrietta A. S. Borck.

"Line Officers Training Camp Recruit Depot Work," by Dr. M. A. Bliss.

Dr. Stanley S. Burns, who was on the program to read a paper entitled, "Evacuation and Field Hospital," was absent on account of illness.

On motion a vote of thanks was extended Dr. Bliss for his efforts in getting up the above program.

A letter from Mr. Henry L. Wolfner, president of the board of education, was read stating that the board was about to take a census of school children and would pay especial attention to the half blind and crippled children and when completed would be glad to meet with the committee appointed by the St. Louis Medical Society to decide what had best be done.

Dr. F. M. Barnes, secretary of the committee on health and public instruction, presented the following resolutions, which were unanimously adopted:

1. WHEREAS, Senate Bill No. 244 and House Bill No. 306 provide that physicians should sign death certificates and file them with the local registrar within twenty-four hours after the death of the patient; and

WHEREAS, Such requirement is oftentimes utterly impracticable and in the city of St. Louis could not be complied with from Saturday noon until Monday morning, during which time the registrar's office is closed; and

WHEREAS, An attempt to comply with the provisions of these bills, if enacted, would seriously endanger the lives of many patients who necessarily would be neglected while the physician endeavored to complete the death certificate and file it with the local registrar within the short period required by the bill; and

WHEREAS, The existing statute requiring undertakers to fill in the blank burial certificate from information obtained from the family of the diseased person and then secure the cause of death and the signature of the attending physician fully meets all the necessary requirements for the tabulation of vital statistics and the completion of the burial certificate; therefore be it

*Resolved*, That the St. Louis Medical Society strongly opposes the passage of these bills and earnestly appeals to the senators and representatives from the city of St. Louis to oppose their passage; and be it further

*Resolved*, That a copy of these resolutions be forwarded to each member of the general assembly from St. Louis City.

2. WHEREAS, House Bill No. 711, relating to laws governing public health, and House Bill No. 298, an act relating to venereal diseases provide changes in

existing laws of this state which are highly desirable from point of view of health of the public; be it

*Resolved*, That the St. Louis Medical Society strongly favors the passage of these bills and earnestly appeals to the senators and representatives from the city of St. Louis to favor their passage; and be it further

*Resolved*, That a copy of these resolutions be forwarded to each member of the general assembly from St. Louis City.

The following amendment to Chiropody Bill (Senate Bill No. 91) was read:

Amend Senate Bill No. 91, by striking out of Section 2 to the printed copy of said bill all that portion of said section beginning with the word "medical" in line 2 thereof, and occurring after the second word "the" in said line and inserting in lieu of the portion so stricken out the following, to wit:

"Treatment for hire or reward of abnormal nails, superficial excrescences of the skin not involving the subdermal tissues occurring on the feet, including corns, warts, callosities and injuries to or congenital or acquired deformities of the feet or conditions requiring the use of anesthetics or incisions involving the structure below the level of the true skin."

Dr. Hamel moved that the amendment be endorsed. Seconded.

Dr. Aufderheide offered an amendment to Dr. Hamel's motion that bill be not endorsed. Seconded. After considerable discussion Dr. Hamel withdrew his motion. Amendment adopted.

Attendance 68.

### Meeting of March 8, 1919

The meeting was called to order at 8:45 p. m., by the president, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following: "Intestinal Obstruction," by Dr. H. S. McKay.

Discussion by Drs. Barney Brooks, Albert H. Hamel, Horace W. Soper, John C. Morfit, Treston R. Ayars, J. Curtis Lyter, William Engelbach and Robert H. Funkhouser; Dr. McKay closing.

"Paget's Disease," by Dr. L. H. Hempelmann.

Discussion by Drs. Warren P. Elmer, William Engelbach and Barney Brooks; Dr. Hempelmann closing.

Attendance 41.

ALBERT F. KOETTER, M.D., Secretary.

## PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

### Fifty-Fifth Annual Meeting, Jan. 19, 1919

#### 1. EXHIBITION OF CASES

A. SKIN LESIONS ASSOCIATED WITH TUBERCULOSIS.—By DR. LILJEDAHN.

B. ANATOMIC ANOMALY OF THE SCAPULA.—By DR. KOFFER.

This patient was referred to the hospital from the Orthopedic Clinic for pes cavus. Family history and past history negative. The left pes clavus or claw-foot is congenital. She complains of pain about her ankle and great toe. General physical examination is negative except for her shoulder girdles and left foot. The patient holds herself with shoulders thrown forward, with marked prominence of suprascapular musculature. She is unable to bend her head backwards. There is a marked prominence of her seventh cervical vertebra and limitation of motion of the scapulae which are similarly deformed. Instead of a thin, medial edge of the scapulae, there is a thick one. No acromion process can be palpated. Just

below the seventh cervical vertebra there is a depression, marking the site of the spina bifida occulta. There is an impulse over this area on coughing. At the edge of the sternum, below the sterno-clavicular joint there is a nodule which appears to be in the cartilage of the first rib. The left foot has some shortening of the tendo Achilles with marked shortening of the plantar fascia, causing curvature of all the toes of the foot.

Urine negative. Blood Wassermann negative. Temperature and pulse normal.

The roentgen ray shows the scapulae to be raised about two ribs. The root of the spine of the scapulae is at the level of the superior angle in this case. At the vertebral border, reaching over to the defective vertebrae, is an extra plate which may be an ununited epiphysis of the vertebral border. This possibly causes the elevation of the shoulder-girdle along with the contraction of the rhomboids and trapezius.

There is a hiatus in the seventh cervical and first and second dorsal vertebrae. There is present a cervical rib which curves around and seems to attach at the edge of the sternum below the sterno-clavicular joint at the site of a nodule of bone which was palpated.

#### DISCUSSION

DR. SACHS: This is a very remarkable anatomical abnormality. The patient's appearance is striking. Note the way she holds her shoulders in raising the arms. The peculiar piece of bone which in the stereoscope seems to run towards the vertebral column has been particularly interesting to anatomists. Dr. Terry unfortunately could not come to the meeting but he has examined the patient and has asked me to read these notes.

The positions of the two scapulae are symmetrical but abnormal, the bones lying between levels corresponding to the sixth rib and a plane 2-3 cm. above the first rib; also they lie nearer the vertebral column than is normally the case. Both the scapulae and clavicles are abnormal in form; the latter much curved in its lateral third and very broadly expanded and presenting a development throughout more robust than is typical of the bone in women. The scapulae are nearly symmetrical; coracoid appears normal; spine strongly developed and with very broad acromion; upper margin and superior angle of bone raised but slightly above level of spinous process. Vertebral margin seems to be articulated with a triangular plate of bone, the apex of which reaches nearly to the first thoracic vertebra, which is deficient in its arch (spina bifida).

Movements of arm normal; of shoulder girdle restricted in rotation of scapula (patient cannot fully elevate arm). Trapezius and levator scapulae active, the former over-developed in neck region; no response from rhomboids by faradic or galvanic stimulation.

By one interpretation of the above conditions, we may regard the spina bifida and possibly the triangular bony plate as more or less involved in determining the abnormalities of position and form in the shoulder girdle. The normal rhomboid musculature arises in part from the spinous process of the first thoracic vertebra which in the present instance is absent; apparently the rhomboids are defective also; it may be that the triangular bone has replaced them. One important function of the rhomboids is support of the shoulder blade; in their absence or from defect in the performance of this work the weight of the shoulder might be expected to drag somewhat on the other muscles which share with the rhomboids in maintaining the normal position of the girdle: the upper part of the trapezius and levator scapulae. These two seem in the present case to have more than compensated for the additional work thrown on them by the absence of the rhomboids and have drawn the shoulder girdle somewhat above its usual

level. The triangular plate of bone appears in the spot where a precocious development of the normally occurring epiphysis could account for it. This might be regarded as an ossification in an abnormal suprascapular cartilage.

Contrary to the above interpretation the position of the shoulder girdle, elevated as it is in one region, may be regarded as a persistence of the cervical relation of the girdle which obtains in the embryo, the spina bifida as a concomitant arrest of development with no causal influence on the position of the girdle and the triangular bone as a "reversion." It should be remembered, however, that whereas a suprascapular cartilage is a not uncommon normal part of the scapula in mammals and is the rule in lower vertebrates, a suprascapular bone is developed in very few mammals beyond the condition of an epiphysis or as incomplete calcification of the suprascapular cartilage.

DR. SACHS: We are fortunate in having here tonight Dr. Hanson of the Zoological Department of Washington University, who is making a special study of the comparative anatomy of scapulae. I wish Dr. Hanson would be good enough to discuss this case.

DR. FRANK BLAIR HANSON: My interest in the shoulder girdle and in this particular case is from the comparative anatomical standpoint. There are always two possibilities in the interpretation of an abnormality such as occurs here. Either it is merely of ontogenetic significance, and therefore of no special value to the comparative anatomist, or its origin may be traced back phylogenetically along the lanes of inheritance to similar conditions normal in the lower groups of vertebrates.

There is probably nothing of phyletic importance in these scapulae, except that the two separate bony plates which extend toward and nearly reach the vertebral column might possibly be interpreted as enormous developments of the superior ossific center of the embryonic suprascapulae; and, further, it was suggested, that the great elevation of the entire girdle, almost to a cervical position, was reminiscent of Gegenbaur's Gill Arch Theory, which in essence states that the pectoral girdle and limbs are modified gill arches. However, Gegenbaur's hypothesis is largely abandoned today in favor of Balfour's Fin Fold Theory. This explanation of girdle and limb origin derives those structures from continuous longitudinal fin folds which extend the entire length of the body in the hypothetical ancestor of the Tetrapoda. From this fold, on either side, the girdles and limbs are formed, while those parts of the fold anterior, posterior, and between the limbs, degenerated and disappeared. This theory accounts for both pairs of limbs and the two girdles, whereas Gegenbaur's took notice of the anterior only; and in relation to the case under discussion, it might be said that since this fold extends the full length of the body, a limb and girdle might easily be differentiated in a higher or lower position on the body.

However, there is present in this subject one character that can only be interpreted in the light of comparative anatomy or evolution. This is the pair of cervical ribs, which arises from the seventh cervical vertebra and extends around nearly to the sternum. That the mammals had their origin in some ancient reptilian stock is an undoubted fact (Huxley to the contrary notwithstanding). The last cervical vertebra in the alligator, and many other reptiles, bears a pair of ribs which extends towards the sternum. In the alligator the distal or ventral end of the rib is continued as a cartilaginous portion comparable to the costal cartilage of the thoracic rib. In this cartilage, halfway between the bony end of the rib and the sternum, is a small calcified or bony center. This detail is also duplicated in the cervical ribs of the subject. The roentgen-ray plate shows quite clearly



a small apparently free nodule of bone lying between the end of the cervical rib and the superior-lateral corner of the manubrium. However, cartilage does not show in the plates, and, in my judgment, the cervical rib here is continued on toward the sternum in a costal cartilage which contains this bony mass. The homology of the occasional cervical ribs in man to true thoracic ribs and to the cervical ribs of reptiles would seem to indicate this fact.

That cervical ribs are homologous to other ribs is shown by the fact that they articulate with the vertebra by two heads, which enclose the vertebral artery; are constant and typical structures in reptiles and birds; and, further, that in the Alligator which has nine cervical vertebrae, the cervical ribs of the last cervical vertebra would correspond to the second thoracic pair of ribs in the mammals.

Cervical ribs are of rare occurrence in man and the lower mammals, indicating a very ancient reptilian character which has all but lost its power in the hereditary materials. In contrast to this is the vermiform appendix, a rudimentary structure which is probably as seldom absent as the cervical ribs are present, whose function was more recently demitted, and which still plays an important rôle in the hereditary substance.

DR. MOORE: I would like to say that those plates were made in the supine position; that is, away from the sternum. I made some today that show more plainly the relations to the sternum. They, however, are not dry or I would have brought them.

DR. BROOKS: Dr. Terry has called attention to the fact that the extra pieces attached to the scapulae correspond in outline to the rhomboid muscles. This fact makes it barely possible that this is a case of ossifying myositis. The presence of a deformity in the foot is interesting in this connection as most cases of progressive myositis ossificans show a deformity in the metatarsal bones.

## 2. HYDROGEN ION CONCENTRATION AND BACTERIAL ACTIVITY.—By B. M. DUGGAR.

The general importance of a consideration of hydrogen ion concentration in biologic phenomena was presented, followed by specific indications of the importance of this factor in the growth and development of various groups of bacteria, including many which are important in fermentation as well as in disease phenomena. Special attention was given the problem of the adjustment of bacteriologic culture media to a definite hydrogen ion concentration and the difficulties in dealing with more or less strongly colored media were pointed out. After indicating the form of simple tintometers and comparators previously employed, the author showed that far more satisfactory work could be done in the determination of the hydrogen ion concentration by means of indicators when the colorimeter is employed. Special forms of colorimeter cups, fitting one into another in pairs, were described, and the data obtained by the use of these was discussed. It was shown that not only may more accurate work be done with the colorimeter but likewise the effective ranges of the important indicators may be materially extended.

## 3. AMOEBIC INFECTION OF THE SKIN.—By DR. M. F. ENGMAN.

The patient, a boy, aged 7, came to the Barnard Free Skin and Cancer Hospital, from southwest Missouri, suffering with ulcerations of the skin. He was pale and emaciated. Scattered over the body were peculiar destructions of tissue. On the left side was a large superficial ulcer about the size of a saucer. The bottom of the ulcer was a purplish red ulcer, raw beef color, smooth, glistening, and covered here and there by shreds of white necrotic tissue.

The edges of the ulcers were raised, undermined and rather infiltrated. The conformity of the ulcers was oval or round. On both legs were smaller ulcers similar in character to the ones above described. These ranged from 2 to 4 inches in the long diameter. The patient gave the following history:

Some months before, he and other members of the family had had a bullous eruption on the body, which disappeared leaving brown pigmentation, probably an impetigo. In this patient, a few of these lesions did not heal but continued to spread and developed into ulcerations, as above described. After he entered the hospital the boy's temperature was 102. Investigation of his blood disclosed malarial infection. Quinin was administered intravenously, but did not affect the temperature. A few days after a diarrhoea began. On investigation of the stools, a parasitic amoeba was discovered, which suggested an investigation of the pus from the ulcers. On a warm stage, this pus disclosed similar amoeba in great numbers. Pieces of tissue from the edges of the ulcers contained this amoeba which confirmed the opinion that the ulcerations of the skin were due to amoebic infection, probably from the bowels. The consensus of opinion in the case was that the amoeba had been conveyed to the impetigo lesions by fecal-contaminated fingers, thus infecting the skin.

On the administration of emetin intravenously and by the mouth the ulcers rapidly improved to a certain stage, but continued administration of the drug produced no improvement. The patient became rapidly worse and died within a short time afterward.

The feeding of young cats with amoeba contaminated food produced no symptoms. Inoculations of young cats and other animals with amoeba met with like success. Postmortem revealed amoebic ulceration of the bowels and a peculiar type of terminal pneumonia.

### DISCUSSION

DR. ROBINSON: This is a very interesting case. In treating amoebic dysentery emetin often, though used over a long period of time, fails to effect a cure. Simon of New Orleans has reported 500 cases of amoebic dysentery and states that he has ceased to rely on emetin to clear up the intestinal lesions.

Of course emetin does have an effect, when first administered, in causing amoeba to disappear from the stools but they appear later on. I think we have to have some doubt about the very rapid effect emetin had in this case. It seemed to produce a crisis-like effect after a few grains, but it may be more effective in healing skin lesions than intestinal lesions.

DR. ENGMAN, closing: This is a very unusual case. A rather thorough investigation of the literature disclosed only a few cases of amoebic infection outside of the bowels, but none of the skin. This boy seemed to have a general amoebic infection. There were amoeba in the pus from the skin and from the lungs and similar bodies were found in the urine. The effect of the emetin was remarkable and rapid. The ulcers began to improve and discharge ceased; the boy's temperature dropped to normal, but it only lasted a short while when the whole condition changed and the further administration of emetin had no effect. I am sorry that some amoebologist did not have the opportunity to study these organisms.

## 4. A COMPARISON OF THE EFFECTS OF HEMORRHAGE AND OF TISSUE ABUSE IN RELATION TO SECONDARY SHOCK.—By DR. ROBERT GESELL.

Shock is looked on in a very general way as a combined circulatory and nutritional disturbance mainly of peripheral origin. The condition is initiated

by a variety of forms of tissue-abuse producing tissue damage, transudation of plasma and stasis of blood. The decreased blood volume eliciting a vascular constriction reduces the flow of blood to a level below that essential for normal nutrition and far below that essential for deteriorated tissues. The condition is thus sustained by the disturbed nutrition and by the consequent inability on the part of the animal to recover the normal permeability of the vessels and therefore restore the normal blood volume that is so essential for an adequate flow of blood.

Since the circulatory and nutritional disturbances are so closely interdependent, one disturbance may become as important as the other.

Of all the numerous vicious cycles the interdependence of volume-flow and blood volume with its consequent effects on nutrition and transudation appears the most serious.

Whether the disturbed function of maintenance of blood volume requires specific treatment or is amenable to treatment by improving the volume and nutrient-flow with the transfusion of blood or acacia as employed in this research was not studied.

If improvement of the nutrient-flow is an effective measure of combating transudation it appears that similar principles of treatment with certain modifications can be applied to hemorrhage and to shock.

The suggestions on treatment of shock derived from this work are:

a. The necessity of recognizing more fully the major forms of tissue-abuse so that shock may be more frequently prevented.

b. The need of early detection and treatment of circulatory disturbances before serious damage has been done.

c. The need for the development of methods to guide in the amount and nature of transfusion.

d. The desirability of directly as well as indirectly combating the increased permeability of the peripheral vascular system.

#### DISCUSSION

DR. SACHS: This paper is particularly interesting to me because of the way Dr. Gesell works and the way in which he arrives at his conclusions. I was rather relieved to hear Dr. Gesell say at the end that he is still unwilling to say that shock and hemorrhage are the same.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held in the Commerce Club rooms, Wednesday evening, March 5, with the president, Dr. A. B. McGlothlan, in the chair. The minutes of the previous meeting were read and approved.

The application of Dr. Virgil Randol Wilson of St. Joseph having been indorsed by the board of censors, received its second reading and the doctor was duly elected to membership.

Dr. Daniel Morton presented a complete record of the transaction of the society with a tabulated yearly list of members dating back from the original organization, April 14, 1903, to Jan. 31, 1918. These records are bound in two volumes and form a complete history of the deliberations and transactions, representing a considerable amount of work and effort on the part of Dr. Morton. They were accepted with thanks, and instructions given that they be filed with the city librarian to be kept there as a permanent record. The secretary was instructed to ascertain what expense Dr. Morton was put to and reimbursement ordered. On motion by Dr. A. L. Gray, seconded by Dr. Leonard, the secretary was instructed to compile the records at the end of each year and add them to Dr. Morton's compilation.

After considerable discussion the following resolution was ordered tabled:

*Resolved*, That the Buchanan County Medical Society indorse the law proposed by the state board of health controlling the registration of venereal diseases.

A committee of ladies consisting of Mrs. Norris, Mrs. Brown, Mrs. Charles Geiger, was given the privilege of the floor for the purpose of explaining a proposition to build a memorial hospital, and the following resolution, introduced by Dr. Spencer, seconded by Dr. Jacob Geiger, was adopted:

*Resolved*, That the society go on record indorsing a memorial hospital as outlined by the committee of ladies aforesaid.

The following resolution introduced by Dr. A. L. Gray was adopted:

*Resolved*, That this society indorse and recommend the services rendered by the Physicians and Nurses Exchange.

The program committee announced that the following members had contributed \$5 each to the Film Fund: L. R. Forgrave, A. B. McGlothlan, J. P. Stanley, P. I. Leonard, A. L. Gray, W. F. Goetze, Caryl Potter, Charles Geiger, Floyd Spencer, Daniel Morton.

There being no further business for the society, the meeting adjourned.

#### Meeting of March 19

The scientific session of the Buchanan County Medical Society was held at the State Hospital No. 2, March 19, at the invitation of Dr. Porter E. Williams, with Dr. A. B. McGlothlan in the chair, and seventy-three members present. A very substantial dinner was served. The guest of the evening was Dr. Jabez N. Jackson of Kansas City, who made a very interesting address.

The following motion made by Dr. C. R. Woodson was adopted:

*Resolved*, That the governor of the state be congratulated on the efficient administration of Dr. Porter E. Williams in the conduct of State Hospital No. 2; and be it further

*Resolved*, That the Buchanan County Medical Society indorse the efficient services rendered by Dr. H. DeLamater, City Health Officer of St. Joseph, and Dr. Daniel Morton as member of the Social Welfare Board of St. Joseph, and recommend to his honor, the mayor, that both be reappointed at the expiration of their terms of office.

It was ordered that a copy of the above resolutions be sent to the governor of Missouri and to the mayor of St. Joseph.

Several interesting neurologic clinical cases were presented by the staff of the hospital.

The following motion by Dr. Caryl Potter, seconded by Dr. Carle, was adopted:

*Resolved*, That the Physicians' Exchange be authorized to telephone every evening to each hospital for the purpose of obtaining from them a list of operations, clinics, and special cases scheduled for the following day; also that all members of this society having cases scheduled for the following day be requested to inform the Physicians' Exchange of such cases; the Physicians' Exchange be instructed to bulletin these cases and keep them posted in an accessible location including the surgical supply house; and the secretary be instructed to compile a list of physicians in the surrounding territory and inform them of the above facts; and be it further

*Resolved*, That a committee of five members be appointed by the chairman to work out the details of the aforesaid proposition.

A vote of thanks was extended to Dr. Porter E. Williams for the splendid entertainment extended to the society. W. F. GOETZE, M.D., Secretary.



### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in regular session in Harrisonville, February 13. On account of an epidemic of influenza no meetings were held in October and December, so the Society proceeded to elect officers for the ensuing year. The election resulted as follows: President, Dr. Aaron R. Elder of Harrisonville; first vice-president, Dr. James U. Scott of Harrisonville; second vice-president, Dr. Watson A. Moore of West Line; secretary-treasurer, Dr. Harry S. Crawford of Harrisonville, and member of the board of censors, Dr. Jacob S. Triplett of Harrisonville. The Society, by vote, authorized the treasurer to pay the annual dues to the State Medical Association for all members who were in active military duty.

It was decided to hold the regular meetings of the Society every three months hereafter, and the meetings will be on the second Thursday of March, June, September and December.

A resolution was adopted indorsing all instructions of the Missouri State Medical Association relative to medical legislation, and authorizing the secretary to carry out all instructions and recommendations of the State Association.

This meeting was called only for business so there was no scientific program. Matters of interest to the profession in Cass County were discussed at some length and plans for a more interesting program at the regular meetings were suggested.

H. S. CRAWFORD, M.D., Secretary.

### HENRY COUNTY MEDICAL SOCIETY

Henry County Medical Society met in regular session in the Court House at Clinton on Wednesday, March 12, 1919, and was called to order by the president, Dr. S. W. Woltzen. Present with him and the secretary were: Drs. J. G. Beaty, N. I. Stebbins, and S. A. Poague; and visitors, Dr. J. F. Hornback of Nevada and R. J. Smith of Appleton City.

Dr. Poague related a case of a hydrocephalous child birth, very large and troublesome. He could not say how much fluid was in the cranial cavity. It was discussed by all present and the treatment of the patient commended. Dr. Poague also reported a case of occlusion of the os externus from curettement of the uterus.

Dr. Beaty told of the use of the pituitary extract in a labor case that did not stop the flooding.

Dr. Stebbins said he had been called to Windsor to see and operate on a boy child five days old with imperforate anus with a successful result.

The secretary introduced Dr. Hornback, secretary of the Vernon County Medical Society, who responded by stating that he was present to know what this society expected to do about continuing the tri-county medical meetings. He said he would call a meeting in June and have a big program if agreeable. By vote the society promised to participate.

The secretary read communications and requests for action, explained what the president and he had done and the society by vote approved the action.

F. M. DOUGLASS, M.D.,  
Secretary and Reporter.

### PERRY COUNTY MEDICAL SOCIETY

Perry County Medical Society met at Perryville, March 4.

Dr. K. C. Garner, who has moved from Crosstown to Perryville, was elected delegate to the state association meeting at Excelsior Springs and Dr. Theodore Estel of Altenberg, was elected alternate.

Dr. John A. Brown of Belgique was elected a member of the society, while Dr. J. P. Clark of Perry-

ville, who retired from practice some time ago, resigned.

There is quite a bad outbreak of influenza in and around Perryville which prevented some of our members from attending the meeting. Dr. Russell of Longtown was ill with influenza and Dr. Estel was sick.

### ST. CLAIR COUNTY MEDICAL SOCIETY

At the meeting of the St. Clair County Medical Society held at Osceola, Feb. 5, 1919, the following officers were elected for the ensuing year: Dr. W. Cline of Appleton City, president; Dr. E. W. Sullivan of Osceola, vice president; Dr. G. D. Dalgliesh of Osceola, secretary.

G. D. DALGLIESH, M.D., Secretary.

### ST. LOUIS COUNTY MEDICAL SOCIETY

At a called meeting held on February 21, the society considered the bill recently introduced in the house of representatives to enlarge the powers of the state board of health in the direction of the conservation of the public health, and after a discussion of its provisions a resolution was adopted officially indorsing the bill.

#### Meeting of March 12

The society was called to order at 3:50 p. m., March 12, by the secretary in the absence of the president and vice president. Present: Drs. Westrup, Sutter, Meisch, Eggers, Baker, Conway. Dr. Baker was elected temporary chairman.

A transfer card was presented for Dr. Frank P. Dunn of Valley Park, from the Franklin County Medical Society, and he was duly elected to membership.

A letter from Dr. Hoxey, relative to his intention to resume practice in the county, was read; also a letter from State Senator Gardner promising to give the bill recently introduced in the house his careful attention.

There being no literary program and a very small attendance, the society adjourned to its next regular meeting.

ARTHUR CONWAY, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1918, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies":

**SULPHOICHTHYLATE PREPARATIONS.**—Preparations containing as their essential constituents salts or compounds of a mixture of acids containing sulphur and designated by the group name "sulphoichthyolic acid" are manufactured from certain bituminous shales. Sulphoichthyolic acid is characterized by a high sulphur content, the sulphur existing largely in the form of sulphonates, sulphones and sulphides. The ammonium compound of this sulphoichthyolic acid—first introduced as ichthylol—has been used extensively. The current estimate of the therapeutic effects of sulphoichthyolate preparations is based almost entirely on the use of ichthylol. As it is not known to what constituent or constituents of ichthylol such effects as it may have are due, the actions of ichthylol cannot be transferred to similar preparations which differ from ichthylol in their composition. The

use of sulphoichthyolate preparations is still largely empirical, and the evidence for their use unsatisfactory.

**ITTILO.**—An ammonium sulphoichthyolate preparation manufactured from bituminous shales found in Giffoni Vallepiiana, Italy. Its composition closely resembles that of ichthyol. Since ittiolo closely resembles that of the original ichthyol, it is claimed that its actions and uses are also essentially those of ichthyol. Guiseppe W. Guidi, New York.

**QUININE ETHYL CARBONATE-MERCK.**—First introduced as equinine. It is almost insoluble in water, and is therefore practically tasteless. Its actions, uses and dosage are essentially those of ordinary quinine salts. Merck and Co., New York (*Jour. A. M. A.*, Feb. 1, 1919, p. 345).

**BIOLOGICALLY REACTIVE FOOD PROTEINS.**—The purified and concentrated proteins of foods. These protein products are used in cases in which persons show a peculiar hypersensitiveness or idiosyncrasy to certain articles of the dietary, both to determine to which food it is due and to immunize the patient against the effects of the food. The test for sensitiveness is made by scarifying the skin and rubbing in the protein to be tested, either dry or in solution. When the production of an urticarial wheal identifies the protein to which a patient is sensitive, the patient is desensitized by administration of gradually increasing amounts of the offending food of the isolated food protein itself.

**COW'S MILK ALLERGENS-SQUIBB.**—A powder representing all the soluble proteins obtained from cow's milk. It is a fine, white, odorless powder, somewhat soluble in water and physiological sodium chloride solution. Cow's milk allergens-Squibb has the actions and uses of Biologically Reactive Food Proteins. E. R. Squibb and Sons, New York.

**EGG ALLERGENS-SQUIBB.**—A powder representing all the soluble proteins contained in hens' eggs. It is a fine, white powder, odorless, somewhat soluble in water and physiological sodium chloride solution. Egg allergens-Squibb has the actions and uses of Biologically Reactive Food Proteins. E. R. Squibb and Sons, New York.

**WHEAT ALLERGENS-SQUIBB.**—A powder representing all the soluble proteins contained in wheat. It is a granular powder nearly white, odorless, somewhat soluble in water and in physiological sodium chloride solution. Wheat allergens-Squibb has the actions and uses of Biologically Reactive Food Proteins. E. R. Squibb and Sons, New York (*Jour. A. M. A.*, Feb. 22, 1919, p. 573).

**BENZYL ALCOHOL.**—While experience alone will tell whether or not the local anesthetic benzyl alcohol or phenmethylol will come up to the expectations of the discoverer of its action, it was deemed of sufficient promise by the Council on Pharmacy and Chemistry to warrant its admission to New and Nonofficial Remedies (*Jour. A. M. A.*, Feb. 22, 1919, p. 594).

## PROPAGANDA FOR REFORM

**B. IODINE AND B. OLEUM IODINE.**—The Council on Pharmacy and Chemistry reports that while B. Iodine (The B. Iodine Chemical Company) is said to be "Nitrogen Hydrate of Iodin" and B. Oleum Iodine, a 5 per cent. solution thereof, the examination made in the A. M. A. Chemical Laboratory indicates that the first is a simple mixture of iodine and ammonium iodid, and the second a solution of iodine in liquid petrolatum. The Council declared these preparations inadmissible to New and Nonofficial Remedies because: (1) The composition of B. Iodine is incor-

rectly declared. B. Iodine is not a newly discovered iodine compound, but a mixture of iodine and ammonium iodid. B. Oleum Iodine is not a 5 per cent. solution of B. Iodine as suggested by the statement on the label and in the advertising, but an 0.85 per cent. solution of iodine in liquid petrolatum. (2) Since the solution of B. Iodine in water will have the properties of other solutions of iodine made by the aid of iodid, the therapeutic claim made for it is unwarranted. (3) The names "B. Iodine" and "B. Oleum Iodine" are not descriptive of the pharmaceutical mixtures to which they are applied. (4) The preparations are unessential modifications of established articles. The first has no advantage over tincture of iodine or compound solution of iodine, and the second no advantage over extemporaneous solutions of iodine in liquid petrolatum (*Jour. A. M. A.*, Feb. 1, 1919, p. 365).

**MISBRANDED NOSTRUMS.**—The following nostrums were declared misbranded under the Federal Food and Drugs Act because of the false, fraudulent or misleading claims made for them: M. I. S. T. (Murray's Infallible System Tonic); M. I. S. T. No. 2, Nerve Tonic; Imperial Remedy; "Japanese Wild Cherry Cough Syrup"; "Japanese Herb Laxative Compound"; Dr. E. E. Burnside's Purifico No. 1; Dr. E. E. Burnside's Purifico No. 2; Dr. E. E. Burnside's Purifico No. 3; Emerald Oil; Bristol's Sarsaparilla; Dr. Belding's Six Prairie Herbs; Dr. Carter's K. and B. Tea; "Brazilian Balm"; "Renal Tea"; Las-I-Go for Superb Manhood; Blood Tabs; Dr. Miles' Restorative Nervine; Kilmer's Swamp Root; Homenta; Hinkley's Bone Liniment; Kopp's Baby's Friend; Kopp's; Kopp's Kidney Pills; Reuter's Syrup; Garfield Tea; Di-Col-Q; Sloan's Liniment; Bannermann's Intravenous Solution; Cummings Blood Remedy, and Gile's Germicide (*Jour. A. M. A.*, Feb. 8, 1919, p. 439).

**CERELENE NOT ADMITTED TO N. N. R.**—Cerelene, a paraffin preparation for the treatment of burns, was submitted to the Council on Pharmacy and Chemistry by the Holliday Laboratories with the statement that it was composed of 84 per cent. paraffin, 15 per cent. myricyl palmitate state to be purified beeswax, and 1 per cent. purified elemi gum, to which are added oil of eucalyptus, 2 per cent., and betanaphthol, 0.25 per cent. It was stated that on "special order" Cerelene has been made containing oil of eucalyptus and resorcin, oil of eucalyptus and picric acid, and picric acid alone. The Council declared Cerelene inadmissible to New and Nonofficial Remedies because there was no evidence to show that this preparation had any advantage over simple paraffin of low melting point (Paraffin for Films—N. N. R.), because there is no proof that the medicinal ingredients leave the wax when it is used, and because the constituent "myricyl palmitate" has not been accepted for New and Nonofficial Remedies (*Jour. A. M. A.*, Feb. 15, 1919, p. 513).

**BEEF, WINE AND IRON.**—So long as one of the largest mail-order houses in this country continues to sell *Vinum Carnis et Ferri*, N. F. in gallon jugs, the drought from prohibition legislation may not be as noticeable as it might otherwise. Seriously, however, is it not about time for the professions of medicine and pharmacy to heave into the discard such utterly unscientific combinations as "Beef, Wine and Iron" (*Jour. A. M. A.*, Feb. 15, 1919, p. 498)?

**MISBRANDED NOSTRUMS.**—The following nostrums were declared misbranded under the Federal Food and Drugs Act because of the false, fraudulent or misleading claims made for them: Hall's "Texas Wonder"; King's Liver and Kidney Alterative and Blood Cleanser; En-Ar-Co Oil; Lindsey's Improved Blood Searcher; White Eagle's Indian Oil Liniment;



Aqua Nova Vita; Brown's New Consumption Remedy; Akoz Ointment; Akoz Rectal Suppositories; Akoz Powder; Akoz Dusting Powder; Akoz Plaster; Akoz Compound; Fenner's Kidney and Backache Remedy, and Wine of Chenstohow (*Jour. A. M. A.*, Feb. 22, 1919, p. 591).

**STYPTICS.**—Ordinary bleeding has a strong tendency to stop spontaneously with the formation of a clot, so that the benefit attributed to a drug that has been used as a hemostatic cannot easily be evaluated. Evidence of the current confusion of cause and effect in relation to local hemostatics has been furnished by P. J. Hanzlik. In general he finds that the local application of vasoconstrictor and astringent agents diminishes or arrests local hemorrhage, while vasodilator and irritating agents (without astringent action) increase local bleeding. The value of the newer thromboplastic agents of the kephalin or tissue extract type is considered as still uncertain. Epinephrin remains as the most efficient and desirable hemostatic agent. Tyramin and pituitary extracts were found efficient, and, unlike epinephrin, they do not increase bleeding later. Astringents were found variably effective, ferric chlorid and tannin standing highest, while alum was disappointing. The vaunted cotarnin salts (stypticin and styptol), antipyrin and emetin were found to increase bleeding on local application (*Jour. A. M. A.*, Feb. 22, 1919, p. 577).

**WILDROOT DANDRUFF AND ECZEMA CURE.**—Dr. Harvey W. Wiley, in his book "1001 Tests," thus characterizes this preparation: "Contains arsenic, and some phenolic body, probably resorcin; perfumed and colored. The trace of alkaloidal material present was too small for identification. Contains 40 per cent. of alcohol, as declared, and less than one-half of 1 per cent. of nonvolatile matter. Claims that it is an herb compound and a positive remedy for eczema and dandruff obviously untenable" (*Jour. A. M. A.*, Feb. 22, 1919, p. 594).

## BOOK REVIEWS

**A MANUAL OF GYNECOLOGY.** By John Cooke Hirst, M.D., Associate in Gynecology, University of Pennsylvania; Obstetrician and Gynecologist to the Philadelphia General Hospital. 12mo of 466 pages with 175 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$2.50 net.

This "Manual on Gynecology" deals with a large number of subjects. Dr. Hirst has chosen his chapters well and presented them in a very practical way.

The chapters on "Abnormalities of the Cervix, Excluding Tears," "Abnormalities and Diseases of the Uterus," and "Diseases of the Fallopian Tubes," call for special mention, as he has dealt with them in a classical manner, and the illustrations are excellent. The author, because of his large clinical experience and ability to express his thoughts in a very concise, definite and logical manner, has written a manual that is worthy of a prominent place in every student's and busy practitioner's library. B. A. P.

**MENTAL DISEASES, A HANDBOOK DEALING WITH DIAGNOSIS AND CLASSIFICATION.** By Walter Vose Gulick, M.D., Assistant Superintendent Western State Hospital, Fort Steilacoom, Washington. Illustrated. St. Louis: C. V. Mosby Company, 1918. Price, \$2.00.

The author, as he states in the preface, undertakes to present "the data essential in the recognition of the different psychoses." This he does perhaps as well as it could be done in an equally limited space. At least he sets forth very well the basis on which the modern classification of psychoses is made; a classification now practically universal so far as es-

sentials are concerned. The details, however, can never be arranged to exactly suit everyone in any attempted classification for there will always be some variety of opinion as to subessentials at least. The author shows wisdom in devoting small space to definitions and those cited are well selected.

On the practical question of commitment to asylums he says, "The ground for commitment is where there is departure from the normal self of the individual of such duration and degree as to disqualify him, either on his own account or on account of others, from being a member of society." Speaking of examination of patients he suggests the following: History of the family, personal history of patient, history of the disease, present mental and physical condition of the patient.

Practically we would be inclined to state these items in exactly inverse order. His descriptions of the more familiar syndromes (mental) manic depressive, dementia praecox, paresis and paranoia, are for the most part well-drawn, especially for the space afforded in this small volume.

And, by the way, its condensed form will we predict give it value to a numerous class of readers who find a necessity for a certain amount of information yet have not time nor facility to acquire it from other large volumes, monographs, etc. The concluding chapters on "psychogenic neurosis," shell shock, etc., are too brief to be satisfactory and add no value to the book. F. R. F.

**A MANUAL OF DISEASES OF THE NOSE, THROAT AND EAR.** By E. B. Gleason, M.D., Professor of Otolaryngology in the Medico-Chirurgical College Graduate School, University of Pennsylvania. Fourth edition, thoroughly revised. 12mo of 616 pages, 212 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$3.00 net.

This volume is a handy quarto of 600 pages. It is appropriately illustrated by 212 excellent wood cuts of well selected subjects of the greatest possible value to the reader and consisting to a great extent of pictures of standard instruments of the most approved design and essential in the technic of the various operations described.

The author addresses himself not to specialists but to students and general practitioners. For this purpose the book is arranged with rare judgment and skill. From personal observation of the author as teacher, lecturer and operator, we can unreservedly endorse his sound and mature knowledge of his subject. Of the newer progress in pathology, therapeutics and surgery, all well authenticated facts receive brief and concise mention as merited.

The author is wise in not giving undue prominence to the fads of extremists as much of such matter becomes medical junk.

The text is especially rich and valuable in medical therapeutics and less so in operative procedure although one or two standard operations are given for each unquestionably surgical condition.

The able conservatism of the surgery advised is very commendable. All operations and other subject matter which has become passé are omitted. Thus two methods of tonsillectomy only are given. The author does not include the Sluder method, asserting that it is not the operation of choice in most types of tonsil.

Sufficient space is devoted to Bárány tests and to the diagnosis of diseases of the internal ear in general, including the correlated intracranial conditions. The description of the turning, caloric and galvanic tests are adequate to an understanding of the subject and are rendered simple and clear. One hundred and thirty-six valuable formulas are tabulated as an addendum covering practically every condition which arises in this field of practice. J. W. S.

# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

Volume XVI

CHICAGO, ILL., AND ST. LOUIS, MO., MAY, 1919

NUMBER 5

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3517 Pine St., St. Louis, Mo.

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### ORIGINAL ARTICLES

#### MYXEDEMA AND HYPOTHYROIDISM\*

GEORGE DOCK, M.D.  
ST. LOUIS

Myxedema in its classical form is a rare disease. Like many other uncommon diseases it is very often unrecognized in practice, especially the less marked cases, which are not so rare. As usual, lack of careful examination of the patient more often causes the error than lack of knowledge. Failure of recognition has two sets of important results. In the first place, the additions to knowledge that should follow the accurate treatment of obscure diseases fail to develop. The obscure cases, the so-called "formes frustes," are obscure partly because they may have elements due to disturbances of functions of organs other than the thyroid. These require clinical study for their elucidation, since experimentation can never imitate all the processes of nature; but if the clinical examples are not recognized reasonably early, they are likely to be confused and their lessons lost.

Some difficulty has been caused by the name myxedema. Many think of advanced or striking cases and so pass by many interesting and even severe cases because the subcutaneous changes are not present in the expected degree. It should be borne in mind that diseases of the thyroid gland have a wide range of mildness or severity, and also may in any case be combined with disease of some other organ of internal secretion. Even more important is it to remember that when one ductless gland is functioning imperfectly other glands are likely to be affected in function. This frequently occurs as an over-function of the associated gland and the over-function may lead to or be followed by lowered function. In these ways not only a great variety of symptom pictures occur, but also changes in a given case at various

times. The various symptom pictures hardly deserve the name of "pluriglandular disease" unless there are definite features of other disease, such as adrenal, pituitary, etc. Another fact should be remembered. All the external bodily traits are due to the action and the interaction of the ductless glands—such things as stature, bone structure, subcutaneous fat, hair, etc. These change at various stages of life, in various degrees, in different people. Minute and gradual changes may be simulated by ductless gland disease, or such symptoms as belong to the menopause or to old age occur untimely as the result of endocrine disease. Those who look on senility as hypothyroid disease are often right, and if they act on their belief will from time to time bring about striking therapeutic results.

The statistical features of hypothyroid disease, especially its incidence in practice, are not of much value because of the many cases overlooked or not recorded. The thing to remember is that it may occur at any age, although most cases are discovered in infantile or late middle life. It affects people of all occupations and of all degrees of financial want or independence.

The essentials to recognition are: a general knowledge of the symptoms, such as can be gleaned from any textbook; the application of this knowledge to all patients examined; the realization that hypothyroidism has been mistaken for various other diseases, and the differential diagnosis in all such cases. There is another valuable aid. In substitution therapy we have a touchstone for hypothyroid conditions which is of the greatest value and when we are in doubt as to whether an edema, or loss of memory, or skin affection, or menorrhagia, is of thyroid origin, we have only to make a careful test and the answer will soon be given. That there is danger in the test is not a serious contraindication. The greatest danger is in the few cases of hidden hyperthyroid disease that may be lighted up by thyroid administration. These should always be suspected. If they are intensified, it must be remembered that any ac-

\* Read before the St. Louis Medical Society, Jan. 18, 1919.



cident, such as overwork, infection like tonsillitis, or emotional shock, might produce the same symptoms, and if the therapeutic test is carried out with the care it deserves no great harm can follow.

To some the question will arise whether there may not be altered secretions in some cases, that is, dysthyroidism rather than hypothyroidism. At present we have no accurate knowledge of such processes. Variations or even combinations of hyperfunction and hypofunction, with altered function of other organs may possibly account for all the varieties encountered. Studies in the minute chemistry of thyroid secretion will doubtless clear up all these questions.

The therapy may seem mechanical to many. One may admit this, but like some other successful empirical therapy, such as quinin in malaria, iron in chlorosis, the practical facts seem too significant to ignore.

As to diagnosis, instead of repeating the easily accessible descriptions of typical cases, I have thought it better to discuss some of the common difficulties in practice and the way to avoid them. A frequent mistake is the treatment of myxedema patients for nephritis. The diseases may be combined, and in many cases of myxedema there is a low grade albuminuria which may be explainable by the experiments of Arthur L. Tatum. In his experimental animals the kidneys showed granular degeneration of the cortical cells and dropsical swelling of the cells in the collecting tubules. But even if there is albuminuria with casts and lowered function, the hypothyroid element can usually be recognized with little trouble. The subcutaneous swelling, usually the basis for the wrong diagnosis, is rarely like either the edema of a parenchymatous nephritis, or still less like that in interstitial nephritis with its characteristic cardiac features. The swollen lips, as well as eyelids, the tougher, even wooden hardness of the swelling instead of the soft pitting of nephritis, the dry rough skin with almost never failing pigment changes, should at once excite suspicion of something more than nephritis. The history of onset if investigated will show not only an absence of causes of nephritis but a wholly different and often most picturesque course. The blood pressure is usually low but may be high.

Between hypothyroidism and senility, as between the former and monopause, the study of the complete course and symptomatology should lead to at least a therapeutically useful diagnosis. Some consideration of the individual symptoms must be taken up with reference to these and other obscure forms.

Changes in hair growth are among the most important symptoms. Some of these are similar to senile changes but they often occur be-

fore the usual senile age; even if the early baldness or grayness is a family trait it may result from thyroid deficiency and should lead to further investigation.

Alopecia, especially at the edges of the hairy scalp, and alopecia of body or extremity hair formerly present and before general senile changes, is especially noteworthy. Thinning of the outer part of the eyebrows is an interesting feature. Excessive hair, an example of which I shall mention later, is rarer but probably occurs as a hypothyroid symptom.

Myxedema pads are often not present or not marked and so may lead to a wrong diagnosis. There may be a distinct thickness of the subcutaneous tissue, local or general and its rapid melting away under treatment sometimes gives the finish to a doubtful diagnosis. Thick fingers, far from the sausage shape of textbooks but recognizable as pathologic, and a known change in the glove and shoe size, are very important signs. The various kinds of roughness, pigmentation, warts, moles, chloasma and other changes in the skin need only be mentioned. The value in diagnosis depends on their suspected relation to the other symptoms and their rapid change under treatment.

An important symptom related to the skin is the sensation of coldness or the sensibility to cold, with actual low internal temperature. Of course this may be present in nephritis or cardiac dropsy, but in many hypothyroid patients it is easy to get a history of low temperature, or cold feeling, many years before, sometimes life-long, and at any rate without cardiac defect. Itching, especially of the legs, so common in senility, is sometimes of hypothyroid origin.

The confusion with nephritis should be avoided in many cases by the striking color of the skin. Sometimes it is true the skin is pale and translucent as in parenchymatous nephritis, rarely cyanotic as in cardionephritic cases. In hypothyroidism there is a tendency to yellowness, sometimes so marked as actually to be mistaken for jaundice. The red malar prominences giving the cheeks an appearance compared to that of a ripe peach is not, I think, very common, but very striking when it occurs.

When the various phenomena already mentioned have been observed the thyroid region should be examined. The results vary widely. There may be no traces of a thyroid gland and no history of pain or swelling. Or there may be a history of repeated throat infections. In some cases there is a goiter, either colloid or fibrous, and occasionally a clear history of thyroiditis or strumitis, especially with or after an acute infection of some kind.

In the cases simulating nephritis and in many others the mental changes are often important, so that in all cases with mental alterations the

thyroid must be investigated. There may be merely tendency to mental fatigue or loss of memory, insomnia, mental sluggishness, less frequently mental irritability, depression, melancholia, hallucinations of sight, hearing or smelling. Watson reports a patient who saw imaginary flocks of dogs and cats. I think many patients have such illusions but on account of the fear of suspicion of alcoholism do not mention them. The suspicion of alcoholism has arisen in many cases for other reasons, as in one case I shall cite later. Loss of sensibility may make the use of the hands clumsy.

Migraine, which has been attributed to so many different causes, is also thought by some to be of thyroid origin. I do not deny the possibility but think other causes should be looked for even in hypothyroid cases.

Herbert French has reported the case of a lady who would lie in bed twenty-four to forty-eight hours at a time, with closed eyes, paying no attention to anybody and refusing food. This alternated with widely maniacal periods and lasted for two years, but as she was about to be sent to a lunatic asylum the diagnosis of myxedema was made, on account of other symptoms, and in six weeks the patient was rapidly recovering. The same author describes a case with diminished intellectual power, effortless vomiting and extreme headache. Frontal lobe tumor was suspected, the patient was trephined and died of erysipelas. Post-mortem, the chief alteration was extreme atrophy of the thyroid gland. The right lobe weighed 0.7 gm.; the left even less.

The combination of paralysis agitans and myxedema has been reported by several observers.

Besides the slowness of speech the voice is often muffled or "leathery." Swellings of the tongue, cheeks, soft palate, and nasal mucosa occur. Brush and Cornell report a case in which paralysis of the palate and vocal cords was diagnosed by two specialists. Then brain tumor was suspected. Stiffness of the hands interfered with the occupation of typewriter. Removal of all symptoms under thyroid proved the etiology.

Menstrual anomalies are not uncommon in women with hypothyroidism and include all forms from amenorrhea to severe menorrhagia.

Rheumatic symptoms, especially arthritis, are often referred to hypothyroidism. I have tried the therapeutic test in a number of cases in which there were other suspicious signs, but have failed to get definite effect on the arthritis in many of them.

Very often the symptoms are masked by the preservation of some traits while others may be distinctly hypothyroid to the practiced examiner. Thus memory and physical and mental energy may be well preserved, though there

may be marked skin changes, with low bodily temperature.

Without taking more time for a discussion of symptoms, it should be more interesting to describe a few actual cases and I shall precede this by a demonstration of some reproductions of historical pictures that illustrate the external features.

#### LANTERN SLIDES ILLUSTRATING HYPOTHYROIDISM

1. Infantile myxedema or sporadic cretinism. Four years old, 25½ pounds, 24½ inches long.
2. Same child after treatment.
3. Infantile myxedema. Hertoghe, 1899; after eight months treatment gained 7 cm.
4. Infantile myxedema. Eleven years. Before and after four months' treatment.
5. Sister of former. Twenty-one years. Before and after four months treatment.
6. Patient of William M. Ord (who first described myxedema), at 21 and 28 years.
7. Myxedema following thyroidectomy. Baumgarten, 1885.
8. Myxedema Commission, 1888. Patient before and after onset.
9. Case of Bircher, 1890. Total extirpation of thyroid in 1888. Had tetany and myxedema. Improved under implantation of thyroid in abdomen.
10. Marked case of myxedema, Bramwell.
11. Myxedema, Hertoghe, 1899. Patient 40 years. Skin characteristic but hair and teeth in good condition. Melancholy and apathy. Improved under treatment.
12. Myxedema, Hertoghe, 1899. Pictures six months apart. Thirty-nine years old. Characteristic face. Amenorrhea, low temperature, rheumatism.
13. Patient of Dr. D. K. Rose. Appearance at 20 years.
14. Appearance before treatment.
15. After treatment.
16. Dock; Case 1; severe case but changes masked by false hair.
17. Same patient; hands; gloves changed two sizes.
18. Same patient after twelve days' treatment, showing alopecia but with hair growing again.
19. Hands after twelve days treatment.
20. Same patient after eight years' treatment. Increase of weight but no myxedema and no symptoms.
21. Same patient.
22. Hands at same time.
23. Case 2; previous diagnosis, nephritis. Face before treatment.
24. Hands before treatment.
25. Face after two weeks' treatment.
26. Hands after two weeks' treatment.
27. Case 3; patient treated for incurable nephritis. Face before thyroid treatment.
28. Hands before thyroid treatment.

Brief accounts of a few cases show some important features. Sometimes the mildest cases give the most striking therapeutic results; patients with a few distinct symptoms. In many severe cases, however, the results have been very marked and lasting under treatment. There are many of these in the literature and I have been able to follow a very good example for eight years.

CASE 1.—I first saw the patient, a woman of 50, when she had been ill for several years. Many years before my first examination she had been told by a physician that her thyroid gland was large but



that it became smaller. At about 45 she had menorrhagia and was curetted in turn by two gynecologists. The knees began to get stiff; the hands and wrists got thick and the feet also, and more than two years before I saw her the glove size had changed from 6¼ to 8¼. The hair had been coming out for several years. For several months the skin was yellow and she was treated for jaundice though her sclerae were not yellow, the stools not decolored and the urine not dark. She slept well and also fell asleep quickly in the day time. Her memory was very poor so that she would sometimes start across the kitchen to do some household chore but forget what she had intended to do before reaching the other side of the room. A policeman once arrested her for drunkenness on account of her reeling gait. For some weeks she had two to four watery stools daily.

The patient was of medium size, pale and sallow. The face, yellow with red slightly cyanotic spots over the malars. The tongue was large and felt thick to the patient. The neck was covered with brownish pigmentation; over it and the adjacent thorax were many dirty gray papillomata. There were thick pads above the clavicles. The skin all over felt thick and tough. The wrists were cracked and dirty. The hands were large and clumsy looking; the ankles were swollen above the shoes but did not pit on pressure. The nails grew well. She never perspired. The abdomen was large. Urine negative for albumin, sugar and casts. Blood: hemaglobin 75, otherwise negative. The best weight was 142; two weeks before examination it was 132; on examination, 125.5.

The reflexes were all weak. Those of the feet absent. The patient walked well on the floor but waddled going down steps and on a fairly smooth sidewalk showed a combination of reeling, rolling and stiffness, with tendency to falling.

#### TREATMENT

The changes under treatment are interesting because of the more than eight years' observation:

March 29, 1908, she was put on 5 grains dried thyroid t. i. d.

April 10, 1908, weight, 118¼. All parts of skin looked cleaner, thinner and smoother. The color was better but still yellow. The hair was beginning to grow along the edges of the scalp. The swellings above the shoes gone. The tongue felt smaller, the speech, memory and gait were better. Hands were warm.

April 27, 1908, 112¼ pounds. All symptoms better. All hair growing, including eyelashes and eyebrows. Glove size 6¼. Blood pressure 110. Work is more easy, memory better.

May 16, 1908, 108 pounds, 14 ounces. All symptoms better. Epidermis is desquamating. Taking 45 grains of dried thyroid daily.

May 30, 1908, soon after beginning above dose began to feel nervous, tremulous; no palpitation; perspired. All old signs improved. Weight 108 pounds. Blood pressure 123-70. Skin clean.

Sept. 18, 1908, 116¼ pounds. Does not tire; skin clean; no edema; knees still stiff, especially at night. Takes three tablets a day for three days; skips one day.

March 16, 1916, has taken two tablets a day for eight years, missing occasionally, and has never had severe symptoms. Joints still stiff, but gait is good and can walk miles. The skin is of good color and texture, no thickening. Wears 6¼ gloves. Hair thick, soft, grows well to edges. Teeth in good condition. Perspires slightly. Blood pressure 170 to 100. Weight 158. Blood and urine negative.

CASE 2.—An interesting case with nephritis but with the hypothyroid element recognizable was that

of L. B., woman of 37, seen in Washington University Hospital April 4, 1914. The complaint was kidney trouble, pain in the small of the back, swelling of the feet, frontal headache, nervousness and dyspnea on exertion. She had two children, living and well. She had rheumatism for six months at 14; had amenorrhea six months in 1913 and again for six months before admission. The ankles began to swell four and a half years before; a little later the face, body and arms. She took Epsom salts for one year for the swelling and it subsided but it returned in the face and eyelids and the salts then gave no relief. Antinephritic treatment was kept up for six months with no effect on the edema. Palpitation of the heart became troublesome.

On admission the skin was scaly, rough and dry, but somewhat elastic. The color on the face was a peculiar yellow and red, suggesting peach skin, with a flush over the malars. The hair very dry; eyebrows thin, lids puffy and narrowed. The thyroid gland was not palpable; there was no axillary hair. The hands were short and thick, the nails negative, palms moist. There was edema to the knees. The shoe size had had to be changed. Gloves were not worn. The patient stumbled on rough ground, "the ankles gave way."

The urine contained albumin and many hyaline casts with a few dark granular casts. The phthalein test gave 37.5 per cent. The blood pressure was 175-130.

Sugar tolerance tests showed no excretion on 200 and 300 grams of glucose. Chlorid output, 8.68.

Under thyroid, in eighteen days the face and hands changed as in the photographs. The phthalein was 44 per cent. Blood pressure 135-85, albumin 0.7 grams per liter at the highest, was absent in two weeks.

The patient was discharged from the hospital and soon after, May, 1914, stopped taking thyroid. By August all the symptoms had returned, but again subsided under thyroid treatment. The palpitation had continued and for it digitalis was given. In May, 1915, she was again in the hospital with albumin in traces and a phthalein of 35 per cent. Trace of albumin only, two days after admission. Phthalein raised to 45 per cent., three weeks later 55 per cent.

In May, 1916, she showed nonprotein nitrogen of 25 mg. to 100 c.c.; only a trace of albumin; no casts.

In this case there probably was a low grade nephritis, though part of the albumin and most of the edema were due to hypothyroidism. In another case treated for nephritis, there was no evidence of that, but other very interesting conditions.

CASE 3.—The patient was a woman of 27, married. She complained of swelling of the ankles and numbness of the hands. She had gained in about a year 42 pounds. The shoes had to be changed from 2½ to 4. There was a history of low specific gravity of the urine for several years—1.000 to 1.005. In July, 1917, there was swelling of the face and wrists. A diagnosis of nephritis was made. She was told she could not recover and put on a strict nephritic diet.

On examination the face was edematous, or rather swollen all over, with an unusual number of freckles, small black pigment moles and a thick growth of fine hairs over the lower part of face, which had come on in the last five or six months. The lips were thick, the eyelids thick and red at the edges. The hair was thick and coarse. The speech was very slow, the voice muffled; the husband said the voice had changed. The tongue was large, the buccal mucosa thick and pale. The thyroid was small. The panniculus was thick, but pads could not be made out. The skin over the wrists and hands was thick and rough. The palms were moist, but the nurse said the patient rarely perspired. The feet were not

edematous. The skin was smooth. Memory was very poor, the patient was almost melancholy, cried easily, was very apathetic, but became angry under the somewhat pressing questions.

The urine, in volume up to 2,600 c.c. a day, had a specific gravity of 1.006 to 1.008; showed a very faint trace of albumin; no casts; phthalein 40 per cent.; nonprotein nitrogen 50. The blood sugar was 0.102; tolerance 200 grains. The temperature was from 97.5 to 98.5.

It was clear the patient had myxedema, and almost as certain that she had not an advanced nephritis. It seemed rather that she might have a mild diabetes insipidus with pituitary disease. The hirsuties suggested disease of the internal secretion of the genital glands but there was no evidence of this on gynecologic examination and the menstruation was normal.

There was no evidence of adrenal disease. Of course it was possible the condition was one of disordered function of pituitary and other glands. The thyroid condition was unmistakable and on this ground treatment was carried out with thyroid. There was rapid improvement after the first few days, so far as temperature, perspiration and mental condition were concerned. I was able to see the patient several months later and found her facial hair gone without any local treatment; the mental condition was normal, the skin and subcutaneous tissue also. The quantity of urine was nearly normal, the specific gravity higher. There were no symptoms, in fact, and this condition was kept up on doses of about 6 grains of thyroid a day.

The case illustrates, I think, the value of persistent treatment with thyroid, in face of other suspected internal organic abnormality.

A few words on the dosage in thyroid therapy. My practice for a long time has been to begin with a small dose, about a grain t. i. d., increase it rapidly until physiologic effects appear, and then reduce until a desired condition has been reached. This as a rule is not difficult for most patients to carry on, especially after they have been convinced of the value of the treatment. The dangers and precautions in such treatment I do not think necessary to detail at this time.

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#### SUB-DELTOID BURSITIS AND STIFF AND PAINFUL SHOULDER\*

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We do not intend to discuss the various types of infectious arthritis of the shoulder joint, such as tuberculosis, syphilis, chronic and acute arthritis, etc., nor the traumatic conditions, as fracture and dislocation, which may result in stiff and painful shoulder, but shall confine ourselves to those commonly called subdeltoid bursitis, and to allied conditions that

we have seen in the clinic and hospital. I shall describe the various types and illustrate them with lantern slides. Dr. Ewerhardt will describe the treatment.

Subdeltoid or subacromial bursitis was described by Codman<sup>1</sup> in 1908 in a complete paper. He states that more patients seek treatment for lesions involving the subacromial bursa than for all other lesions of the shoulder joint, including tuberculosis and fracture, added together, and that in those clinics where this is not the case the condition has not been properly diagnosed.

In subdeltoid bursitis the structures which play the most important part are the bursa and the tendon of the supraspinatus muscle. "The subdeltoid or subacromial bursa, the largest of the bursae about the shoulder joint, is situated between the top of the capsule, the coracoacromial ligament and the acromion, extending downward under the deltoid" (Piersol). Codman emphasizes the fact that it is attached to the tendinous expansion of the supraspinatus muscle. It is the loose periphery of the bursa which is movable and which, rolling on itself, allows the roof to slide on the base. It is because of the exposed position and mechanical importance of the subacromial bursa that inflammations in it are of paramount importance.

The supraspinatus muscle occupies the supraspinatus fossa of the scapula, arising from the inner two-thirds of this, and from the supraspinous fascia. The fibers pass laterally and converge to a tendon which is inserted into the upper facet on the greater tuberosity of the humerus and into the capsule of the shoulder joint.

The supraspinatus is an abductor of the humerus and by its attachment draws the head into the glenoid cavity, which acts as a fulcrum in abducting the arm, thus allowing the deltoid to act, which if this were not the case, would tend to draw the head of the humerus upward under the acromion (Codman).

The situation of the subacromial bursa and the tendon of the supraspinatus, passing between the head of the humerus and the acromion, exposes them very readily to trauma. Any force that drives the head of the humerus upward may injure the bursa or the tendon, or both. This may be the result of an upward blow on the arm, or the sudden contracture of the deltoid before the supraspinatus can act, forcing the tuberosity against the acromion and injuring the relaxed tendon. As a result of this trauma, an inflammatory reaction is set up in the tendon or in the bursa. Frequently a slight rupture in the fibers of the supraspinatus tendon at its attachment results and causes an inflammatory reaction in the bursa. These

\* Read at the meeting of Washington University Medical Society, St. Louis.

1. Boston Med. and Surg. Jour., 159, 1908.



changes have been demonstrated by Codman and others at operation and at necropsy. An inflammation may also start in the bursa as a result of an infection. At times the bursa is pierced by an exostosis developing at the attachment of the supraspinatus.

In some cases a deposit develops in the bursa,

such as a fall with the arm extended, or some sudden movement, as in throwing a baseball; or it may be gradual and insidious.

The pain in the acute cases is usually severe and is frequently worse at night. It may be localized at the point of the shoulder just below the acromion. It may often be referred



Fig. 1.



Fig. 3.

or probably more frequently in the tendon of the supraspinatus. These deposits have been found at operation to be either gelatinous or a solid lime deposit. They are quite clear in the roentgen ray.

As a result of the inflammation in the bursa, adhesions very frequently develop, which either

to the insertion of the deltoid or even down the arm to the elbow or into the fingers. At times it extends into the neck.

In cases where the motion is not limited the point of tenderness passes under the acromion with the tuberosity when the arm is abducted, and reappears when the arm is lowered; the



Fig. 2.



Fig. 4.

markedly limit motion in the shoulder or may eventually cause almost complete rigidity.

Codman describes three types of bursitis: (1) acute or spasmodic type; (2) subacute or adherent type; (3) chronic or nonadherent type. The onset may be either sudden or gradual, it may follow a definite history of trauma,

Dawborn sign. This sign is absent in chronic cases in which there is limitation of motion. In certain cases the pain is felt just at the moment when the tuberosity passes under the acromion process.

In the acute cases abduction and external rotation are limited and patients are unable to put

their hands to the small of the back or to the back of the neck. In some cases there is apparent inability to abduct the arm, due to the reluctance of the supraspinatus muscle to pull on its injured tendon. In the chronic cases with adhesions all motions of the shoulder may be restricted, especially abduction and rotation,

point, especially in acute cases. The patient, unable to raise his arm, is told to bend forward and touch his toes with his fingers. This he can readily do as the motion is performed by gravity. The arm is then raised, by the surgeon, and the patient instructed to stand erect. He will find that the arm is held in the vertical



Fig. 5.



Fig. 7.

and the joint may seem practically ankylosed. In all bursal cases, however, there are about 10 degrees of free motion; where this is absent the inflammation is in the true joint (Codman).

In Type 3, the essential characteristic is painful motion, but the full arc of motion persists. The trouble is due to slight irregularities

position without any pain. Pain reappears, however, on lowering the arm.

The prognosis is on the whole favorable. The acute cases may run a short course of three or four weeks with complete recovery, or they may become chronic with adhesions and marked limitation of motion. This stiffness if



Fig. 6.



Fig. 8.

in the base of the bursa. The motion instead of being free and smooth is interrupted as the irregularity passes under the acromion.

Very few of the third type of cases have come to our attention in the orthopedic clinic.

Codman<sup>2</sup> has given us a valuable diagnostic

untreated tends to improve and usually complete function is restored at the end of two or three years.

In the chronic cases with adhesions and in those cases showing a deposit operative treatment has been recommended by some writers. This consists in opening the bursa and breaking

2. Boston Med. and Surg. Jour., 166, 1912.



and cutting adhesions, or in the removal of the subdeltoid portion of the bursa; or, where a deposit is present, the removal of the deposit either from the bursa or from the supraspinatus tendon.

Up to the present time none of our cases has required operation, as they have all shown definite and satisfactory improvement under conservative treatment, especially in those cases where treatment could be carried out consistently and intelligently.

In the acute cases, rest is indicated. This can be secured by the use of a sling if the patient is up and about, or best, by putting the patient to bed with the arm abducted. Brickner<sup>3</sup> advises fastening a sling to the arm and attaching it to the head of the bed, with the arm abducted as far as is comfortable. The head of the bed is then raised, and as the patient slips downward the arm gradually abducts, usually without pain, as the muscles are relaxed.

In the chronic cases in which motion is limited by adhesions it may be necessary to break these up under an anesthetic. Afterward the arm should be kept in abduction until the reaction has subsided.

We have had four cases in the clinic which were manipulated under an anesthetic to break up adhesions. These were done by Dr. Stone, who put the shoulder in a plaster spica in 90 degrees abduction and complete external rotation. This position of external rotation was, I believe, original with Stone. At the end of two weeks the spica was bivalved and the arm, though still held in abduction, was given passive rotation daily.

In the last two years, we have seen no cases that required manipulation.

Acetylsalicylic acid may be used to relieve pain. I give all patients potassium iodid, as I feel confident that it promotes absorption and shortens the duration of the disease.

The great majority of cases of stiff and painful shoulders is of the subacromial type. We wish, however, to mention one or two other types.

Sir Robert Jones (*Injuries to Joints*) describes a condition due to contusion of joint cartilage and states that "It occurs in a very typical form in the shoulder joint in association with Colle's fracture. The fracture is treated, but no complaint is made of the shoulder. A fortnight or three weeks later, when the fracture is getting better, and greater freedom of the limb is allowed, the patient experiences pain when he tried to move the shoulder. He considers this due to stiffness, goes on moving his shoulder, and soon both pain and stiffness become worse. A vague diagnosis of "rheumatism" is often made, and later the patient, fail-

ing to obtain relief does nothing, and in three or more months the shoulder recovers."

I believe that we have had one or possibly two cases in which this condition occurred. Our cases, not recognized at the time, were given massage and exercises and did not show the improvement that was to have been expected.

Another class of cases shows an infectious process about the acromio-clavicular articulation. In these cases the symptoms are very similar to those of subacromial bursitis, except that the pain is usually more in the anterior portion of the shoulder. The roentgen ray, of course, shows the process.

In the ordinary case of subacromial bursitis the roentgen ray does not show and change and, unless there is some other process present, the shoulder joint appears practically normal.

The accompanying illustrations show clearly some of the types of shoulder involvement mentioned.

Figure 1. A case in which there is a marked deposit at the acromio-clavicular articulation, and which on inspection may closely resemble subacromial bursitis.

Figure 2. A roughening of the greater tuberosity at the attachment of the supraspinatus.

Figure 3. A deposit at the attachment of the supraspinatus which might possibly be a small fragment of detached bone. This condition was a result of throwing a baseball. There is also a distinct deposit extending out from the acromion.

Figure 4. A very large deposit either in the bursa or in the tendon of the supraspinatus.

Figure 5. A deposit at the attachment of the supraspinatus and below. This picture was taken in January, 1916.

Figure 6. Roentgen ray of the same patient taken in January, 1919. The deposit has entirely disappeared and the joint is apparently normal. In the interval the patient had done a great deal of hard work with no symptoms and had forgotten which arm was affected.

Figure 7 (R. W.). This picture was taken in November, 1916, and shows a very definite deposit about the attachment of the supraspinatus tendon. The onset was acute, coming on in the evening after playing tennis.

Figure 8 is a roentgen ray of the same shoulder taken in February, 1917. The deposit has practically disappeared. While under treatment for the right shoulder, this patient's left shoulder also developed acute symptoms, and a roentgen ray showed a similar deposit, which later cleared up. Both shoulders are now normal.

Before discussing the treatment, it may be of interest to make a brief statistical study of the cases seen in the Orthopedic Dispensary, Wash-

ington University, since 1915. Seventy-five patients have been treated, 34 males and 41 females. The ages ran from 22 years to 78 years. The greatest number, 57, was between 40 and 60 years. A Wassermann was made in eleven cases, all negative.

A more careful analysis was made in fifty cases. There were 23 males; of these, 17 had involvement of the right shoulder, 4 of which were the result of trauma. In 6, the involvement was in the left shoulder, and of these, 2 were the result of trauma.

There were 26 females, showing involvement of the right shoulder in 14 cases with 7 due to trauma. In the left shoulder there were 12 cases, with only 3 due to trauma. Sixteen cases in fifty gave a direct history of trauma.

The following occupations were represented: housewife, 21; labor, 6; laundress, 3; no occupation, 3; tailor, 2; nurse, 2; chauffeur, stone cutter, tobacco worker, brewer, presser, cleaner, junk dealer, "cap shop," carpenter, tanner, driver, horseshoer, clerical, one each. A Wassermann was made in three cases, all negative. Four were colored.

The ages were:

30 years to 39 years,	8 cases
40 years to 49 years,	12 cases
50 years to 59 years,	18 cases
60 years to 69 years,	10 cases
70 years to 79 years,	2 cases

It is interesting to consider the question of occupational trauma as an etiological factor in these cases. The great majority of the cases in the men, not the result of direct violence, was in the right arm, which is subject to the hardest use. There were thirteen cases of gradual onset in the right shoulder and only four in the left. This seems quite suggestive.

In the women the distribution is more interesting. In the right shoulder seven were of insidious onset, while in the left there were nine cases. This would suggest that the left shoulder is more vulnerable in women. It is interesting also to note that of seven cases in the right shoulder, there were two laundresses, one nurse, one "cap shop," and one cleaning woman. All of these occupations would mean a more active use of the right arm. Practically all the housewives had bursitis in the left arm. It may be that housewives have some especial type of work that tends to traumatize the left arm, possibly sweeping.

I believe that the cases of non-traumatic bursitis that we have seen have been due to an occupational strain, very much as syphilis is apt to attack a joint which is subjected to a special strain.

The age at which the affection appears is of interest also, the majority of cases appearing between 40 and 60, an age at which the various

types of chronic arthritis are more common. It would suggest, as some of our roentgen rays have shown, that the condition is probably related to osteo-arthritis, possibly of the infectious type.

#### TREATMENT BY MEANS OF PHYSICAL THERAPY

This joint paper was prepared largely as a result of the uniformly good results we have obtained by treating subdeltoid bursitis and allied cases by means of massage, heat and proper manipulations. We wish to discuss at this time the manner and methods which brought us what we are pleased to term very good results, of approximately seventy-five cases of painful and stiff shoulder joints. Of this number we claim practically perfect results in all but two. After the cases are properly diagnosed in the orthopedic department, they are referred to the hydro and physical therapy department. Careful notations are made regarding location of pain and tender points, extent of joint mobility and condition of muscles. The next procedure is to heat the parts thoroughly by means of radiant heat, which method we have found to be far superior to the ordinary convective heat because of its penetrating power. The luminous rays enter the soft tissues for a considerable distance, estimated an inch or more, carrying with them the heat rays, and being themselves converted into heat by the increased resistance offered by the soft tissues. Heat is a vitalizing agent to all tissues, particularly radiant heat. The parts are first covered with a thin layer of mineral or vegetable oil to keep the skin soft and pliable. After about twenty minutes of mild heating the muscles about the joint are gently massaged for the three-fold purpose of removing the ever present spasm which is often the main reason for stiffness; to break up adhesions in and about the joint, and to improve the circulation by mechanically hastening the retarded venous and lymph flow and quickening the arterial. This is followed by gentle motion in all directions. It is essential that during these procedures the patient be placed in a position insuring relaxation of all the fifteen or more muscles which are related with the shoulder joint. Under normal conditions this complex neuromuscular apparatus works in a free and harmonious manner, the antagonistic groups relaxing when the active groups are working. This condition, however, does not exist in a case of an injured joint. The harmony of co-operation is destroyed by a flood of misdirected impulses emanating from the injured area, with the result that many of the muscles are in a state of hypertonicity, commonly called spasm, which is nature's way of keeping the injured part at rest. Frequently nature overdoes her



attempts at repairing, which in these cases is often manifested by spasm remaining long after the acuteness no longer exists. In the treatment of injured joints, therefore, it is of vital importance that this be recognized. Any attempt at rough usage will exaggerate this condition of spasm and block the treatment. It is essential that the patient must have complete confidence in the operator. He must be absolutely assured that the manipulations to follow will be executed slowly and gently, barring all sudden and violent emotions, and that further efforts will cease at the expressed wish of the patient. With this mutual understanding cooperation is established and an increase of spasm avoided.

After a thorough massage, motion, particularly abduction, is attempted by means of gentle resistive movements. It has been found that in the earlier stage of treatment, passive movements do not allow as full a range of mobility as can be obtained by employing gentle resistive movements; in fact, in some cases we have experienced an increase of spasm in spite of the most careful and gentle movements. Resistive movements act by decreasing the action of the antagonistic group thereby lessening the inter-articular pressures which, interpreted, means less pain, thus allowing a greater amplitude of joint motion. Resistive movements are followed by gentle but firm attempts to break up any adhesions which may be present. During these manipulations the scapula should be firmly fixed by one hand, the other hand performing the necessary motion. This procedure is necessarily accompanied with some degree of pain, but with a little encouragement from the operator patients are generally willing to undergo this temporary discomfort.

The proper dosage is, however, an important factor. If the patient complains of an increased pain following treatment, the indications are to reduce the severity of the treatment, even to discontinue all motion for a day or two. Otherwise the treatment should become increasingly severe from day to day. Finally our patients are asked to perform free active exercise with wands, Indian clubs, or dumb bells. In certain cases where the patient has learned not to rely entirely on the rotation of the scapula in the effort to abduct the arm, he is placed in the Zander abduction and arm rotation machines, but this may be regarded as entirely a matter of convenience and not necessity, for this type of apparatus may be entirely dispensed with in this treatment.

The patient is further instructed to perform certain prescribed exercises at home, which consist mainly of arm raising and swinging, either with a flat iron, dumb bell, or other convenient weight.

The duration of treatment varies from three to ten weeks, although in a few cases the period was protracted, mainly because of irregularity of treatment. If at all possible, treatments should be given daily.

Somewhat the same line of procedure is followed as a postoperative measure, but, of course, much milder in character. After an open operation, massage and slight motion may begin at the end of the first week. In cases where adhesions were broken up under anesthesia we may begin on the second day with gentle massage.

It may be of interest to note a typical case that has recently come to our hands. Mr. X. came with a history of stiff and painful shoulder having had it treated for nearly a year for rheumatism and arthritis. There was no more than 10 degrees of free motion in the joint, it was painful on touch or attempt at motion. The roentgen-ray plate showed a lime deposit at the site of the subdeltoid bursa  $\frac{3}{8}$  by  $\frac{1}{8}$  inch.

Treatment along the plan outlined above was at once instituted and resulted in an immediate improvement, both with respect to pain and free motion. This was continued for five weeks, at first daily and later every other day. At the end of that time the patient left the city for the winter. A letter received from him three weeks later mentioned the fact that he was entirely well and playing golf. This man had been treated for nearly a year, medicinally, and was ordered to keep his arm in a sling. He was also urged to have an open operation to which he would not consent. He has now regained full and free mobility of the joint in all directions.

Metropolitan Building.

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#### CASE OF HEMOLYTIC STREPTOCOCCUS INFECTION OF BLOOD WITH RECOVERY\*

G. C. McCoy, M.D.  
ST. LOUIS

*Family History.*—Negative.

*Past History.*—Periods started at age of 16, always been regular, not excessive, lasting 4 to 6 days and not very painful. Patient 22 years old, born and raised in Texas. Came to St. Louis in May, 1917. Never had malaria or typhoid fever. Had pneumonia seven years ago; complete and good recovery.

*Present History.*—Last menstrual flow started May 20, 1917, same as usual. No morning sickness until August 20, when morning sickness started. This lasted about five weeks, and at times she vomited a great deal. Felt life about October 1.

October 10. Uterus fundus extends to umbilicus, movable, etc. Patient feeling good. Expected time Feb. 27, 1918. Urine, sugar negative, albumin negative.

\* Read before the St. Louis Medical Society, Feb. 1, 1919.

Jan. 5, 1918. Uterus fundus extends midway between umbilicus and sternum. Head down. Everything normal. Urine, specific gravity, 1.020; sugar negative, albumin negative.

Feb. 24, 1918, developed severe tonsillitis and lagrippe. Tonsils enlarged, red, no membrane. Temperature at this time was 103, pulse 120, respiration 25. Lungs clear. Patient put to bed. Cathartic given and combination sodium benzoate and sodium salicylate given. Fever remained above 100 for about five days. Patient was allowed to leave bed on fourteenth day, when fever had been normal for two days.

Urinalysis, March 5, specific gravity, 1.020, albumin slight trace, sugar negative.

March 14, 1918. Confined at St. Ann's Maternity Hospital. Normal delivery. Very slight tear of perineum. Repaired at once. Silkworm gut used (removed eight days later). Convalescence from confinement uninterrupted. No fever, pulse normal, rate ranging from 80 to 90 entire time. Liquid diet first three days, castor oil third morning, milk scanty; sat up on tenth day, feeling good. Afternoon of eleventh puerperal day had chill and fever of 103, pulse 115, respiration 28. Next morning temperature 100, afternoon temperature went up to 102, pulse 110. From this time on temperature ranged from 99 to 106.

March 26. Blood examination for plasmodia malaria negative. Widal negative. Severe neuritis (right sciatic) developed, which continued throughout her further course, at times becoming so severe that morphine was necessary.

April 6. Dr. Henry Schwarz was called in consultation. He assured me her confinement had nothing to do with the present condition.

April 14. Slow forming abscess started in left buttocks, not very painful and not pointing or no swelling until three weeks later. All this time only felt sore when she would lie on her back.

May 9. Patient transferred to St. John's Hospital. Aspirated abscess of buttocks and found a great deal of pus. Then I incised deeply and evacuated about one pint of rather thick pus. Pus was sterile (culture made).

April 28. Swelling started over thyroid gland. This developed gradually, not painful, only uncomfortable choking feeling on swallowing. No redness, no fluctuation.

May 8. Aspirated with hypodermic needle drawing off rather creamy pus.

May 9. Incised, evacuating about  $\frac{1}{2}$  pint of pus. Neck went down to normal size at once. (No involvement of thyroid.) This was abscess in subcutaneous tissue only. Rubber drain put in. Pus examined, smear and culture showed no bacteria or was sterile.

June 2. Abscess developed on right buttocks—incised and drained—pus sterile.

June 5. Abscess developed in left axilla; incised and drained.

June 15. Abscess developed over insertion of deltoid muscle (right arm); incised and drained.

These latter abscesses were smaller and red. Pus from all was sterile as shown by smear and cultures.

*Subjective Symptoms.*—Patient was always very comfortable and cheerful except for pain in right sciatic nerve and when she had chills with severely high fever. Had slight cough, never coughing up much mucus. Restless at night; as a rule, could not sleep. All the time she had fever she of course became weaker, but was always cheerful and rational. Digestion good at all times.

*Physical Examination* (March 26).—Tonsils chronically large. Teeth in good repair. No cavities, has had no trouble with them for two years, examined and cleaned by dentist every six months. No pelvic inflammation at any time before or during her puerperal or further sickness.

*Laboratory Findings.*—March 26, the first day after initial chill, blood examined for malarial plasmodia, negative. Widal, negative.

May 14. Blood culture shows pure growth streptococci in broth. Subculture on blood agar shows hemolytic streptococci.

May 17. Blood agar slants inoculated for vaccine.

May 20. Pure growth streptococci hemolyticus on plain agar and in broth.

May 17. Sputum examination, tubercle bacilli negative. Streptococci, staphylococci and fungi present.

*Special Examination.*—Roentgen ray: right pelvis negative, no joint involvement.

*Roentgenogram of Chest.*—Apices clear, no parenchymal shadows, no peribronchial thickening, very few calcified areas. Some displacement of heart and vessels to right, normal curve of aorta to left.

*Urinalysis* (May 24).—Twenty-four-hour specimen, 1,100 c.c.; color, amber; specific gravity, 1.018; reaction, acid; albumin, faint trace; dextrose, negative; casts, negative. These were the usual urinary findings all through the course.

*Other Blood Examinations* (May 10).—Wassermann negative; stained smear normal; erythrocytes, 3,730,000; leukocytes, 7,200; hemoglobin, 60 per cent.

June 28. Erythrocytes, 3,450,000; leukocytes, 8,800.



## TREATMENT

While in maternity hospital, quinin, 3 grains, every three hours for four days, was given at beginning. Castor oil when needed to produce copious bowel movements. Being from the South I suspected latent malaria, in spite of the negative malarial plasmodia. Quinin had no effect whatever. Later cod. phos. gr.  $\frac{1}{2}$  phenacetin gr.  $\frac{1}{2}$  Caff. Cit. gr.  $\frac{1}{2}$ , Aspirin gr. 5 in capsule, given every three hours; this was continued for six days without any effect.

May 9. Patient transferred to St. John's Hospital, under service of Dr. William Engelbach.

*Treatment.*—Symptomatic id. est. Helmitol gr. xxx q three hours. Digalen *m x v* T. I. D. Forced feeding, high caloric, plenty fluids. Carlsbad salts 1 z. each morning. Trional and veronal gr. vii at 8 p. m. in glass of milk when needed for sleep.

While we were waiting for autogenous vaccine, we decided to use strepto-sero-bacterin (Mulford), 1 c.c., each day hypodermically. It was difficult to get autogenous vaccine, so we continued the strepto-sero-bacterin, giving 1 c.c. each day for fifty days, or, in all, she was given 50 c.c. streptococcic-sero-bacterin.

July 12. After fever had been practically normal for five days and blood no longer showed streptococci, patient was put in chair a longer time each day, until August 15, when she went home and was permitted, with assistance, to walk some. She gained in weight and strength fairly rapidly.

September 16. From the sciatica and being in bed so long, adhesions formed, leaving the right knee flexed. Roentgen ray showed no bony adhesions or involvement of knee joint.

September 17. Under ether, adhesions were broken up and leg and thigh put in cast.

September 21. Cast removed, knee freely movable (except extreme flexion), advised massage with passive and active movements several times daily.

## SUMMARY

General physical condition good until tonsillitis developed, which lasted fourteen days, or patient was well five days before baby was born and for ten days after, or fifteen days intervened between apparent complete recovery from tonsillitis and initial chill of streptococcic infection.

Streptococcic infection lasted ninety-nine days, judging by symptoms, fever, blood examination, etc. Fever ranged from 99 to 106, but not with any regularity corresponding to the development of abscesses. In all, she developed fifteen to twenty abscesses, large and small, but none in the viscera.

Cause of the sciatica not traceable, unless it was from involvement of the spinal cord, but there were no other cord symptoms. Patient

today is walking around, has gained 20 pounds in weight and feeling fine. Baby strong and healthy from beginning.

*Bacteriological Study.*—Culture of blood in broth, flocculent sediment. Subcultures from this grown on blood agar showed typically raised colonies with a wide surrounding clearing zone. Blood smears of the patient made directly on blood agar slants showed same colonies. Smears made on slides showed mostly long chained forms of streptococci.

## CONCLUSIONS

Where was the focus of infection? In my opinion, it was in the tonsils.

1. Because of the virulence or severity of the tonsillitis which preceded the onset of the blood infection.

2. I believe we can eliminate any puerperal infection because at no time was there any sign, such as tenderness, swelling or redness of any genital organ, or other than normal discharge from uterus. The tear of perineum healed readily with no sign of infection.

3. We can eliminate the teeth and gums, for she had, as we said before, exceptionally good teeth and no pyorrhea.

4. There was no scratch or break in the skin that could have been the focus of infection.

816 Metropolitan Building.

## NOTES ON DAKIN'S SOLUTION

Instructions for Its Preparation by Electrolysis of Sodium Chlorid, Liquid Chlorin, and Bleaching Powder

JAMES G. MONTGOMERY, M.D.  
KANSAS CITY

## INTRODUCTORY

The following are a brief collection of notes in A, B, C form for laboratory work, employing the exact methods of preparing Dakin's solution used by the War Demonstration Hospital at Rockefeller Institute. There are at present no commercial preparations on the market that will answer to the requirements in the definition of Dakin's solution, i. e., the definite hypochlorite concentration and alkalinity tests.

## DEFINITION

Dakin's solution (NaOCl) is a sodium hypochlorite solution which contains not less than 0.45 per cent. (0.40 per cent. now considered too low) nor more than 0.50 per cent. sodium hypochlorite and gives proper alkalinity tests or no color with powdered phenolphthalein but shows a distinct flash with a 1 per cent. alcoholic solution of phenolphthalein. If

the percentage of sodium hypochlorite is less than 0.40 per cent. the antiseptic power of the solution is too low, if greater than 0.50 per cent. the solution is irritating. The alkalinity is between 100 and 1,000 times that of water.

Alkalinity Tests of Dakin's Solution: The alkalinity tests and sodium hypochlorite concentration are equally important but entirely independent.

1. Test with powdered phenolphthalein. Add a few crystals of phenolphthalein to surface of about 5 c.c. of the solution to be tested and shake vigorously. Dakin's solution should remain entirely colorless. If there is any red color the solution is too alkaline and must either be discarded or the excess alkalinity neutralized.

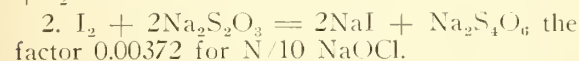
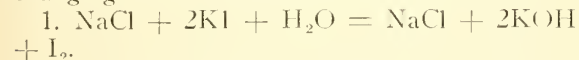
2. Tests with alcoholic solution of phenolphthalein: About 0.5 c.c. of alcoholic solution of phenolphthalein (1 per cent.) is squirted from an eye dropper into about 5 c.c. of the solution to be tested. The solution will show a red color which will soon disappear. If there is not at least a momentary flash of red color the solution has so low an alkalinity that its hypochlorite contents will rapidly diminish.

Titration of Dakin's solution: To determine percentage of sodium hypochlorite:

1. Measure 10 c.c. of Dakin's solution, using a bulb pipette, into a beaker or Erlenmeyer flask containing approximately 50 c.c. tap water.

2. Add 5 c.c. of a 10 per cent. potassium (or sodium) iodid solution and 3-4 c.c. of glacial acetic acid to 1 (always add KI first).

3. Titrate from burette with decinormal sodium thiosulphate until yellowish tint of iodine color is nearly gone, then add a few drops of starch solution and continue until the blue color disappears. Make starch solution by boiling 0.5 gm. starch in 100 c.c. water, cool and filter. Each c.c. of N/10 sodium thiosulphate is equivalent to .00372 gm. sodium hypochlorite. Then the number of cubic centimeters of decinormal thiosulphate required to the estimation of hypochlorite is based on the fact that they liberate iodine from iodids. The iodine is then titrated with sodium thiosulphate, the colored iodine changing to the colorless iodid.



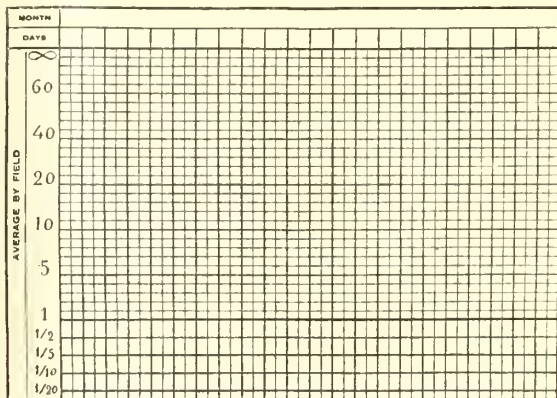
From (1)  $\text{NaOCl} = 2\text{I} = 2\text{H}(2\text{I})$  is equivalent to 2H in this reaction  $2\text{H} +$

$2\text{I} = 2\text{HI}$ , therefore  $\text{IH} = \frac{\text{NaOCl}}{2}$ , the gram molecular weight of NaOCl contains the equivalent of 1 gm. of hydrogen. One liter of an N/10 solution will contain  $\frac{37.23}{10,000} = 0.00372$  gm. NaOCl or the factor for N/10 NaOCl=

0.00372; therefore we multiply by the factor 0.00372, which gives grams of NaOCl in the sample used. If sample were 10 c.c. and we wanted our amount expressed in per cent., we multiply by 10,

$$\frac{\text{C.c. N/10 thiosulphate) } (0.00372 \times 100)}{10} =$$

The following chart may be used and the percentage read directly from number of c.c. by the intersection with diagonal line:



#### METHODS OF PREPARATION OF DAKIN'S SOLUTION

1. Electrolysis of NaCl solution.
2. Action of chlorine on sodium carbonate.
3. By double decomposition of calcium hypochlorite and sodium carbonate.

1. Electrolysis of NaCl solution: This method gives satisfactory result wherever apparatus and electric current are available. A 30 per cent. NaCl solution diluted ten times is placed in a cell. The temperature of the solution must be around 11 to 15 degrees, a low voltage (110 volts) is required the length of time for cell to run in clarinating is determined by experience. After a certain time the solution is tested by titration. The chemistry is  $\text{NaCl} + \text{H}_2\text{O} = \text{NaOCl} + \text{H}_2$ . The H is liberated continuously while cell operates. It is necessary to add buffers salts to maintain stability of Dakin's prepared by this method. So far the practicability of the method has not been definitely determined.

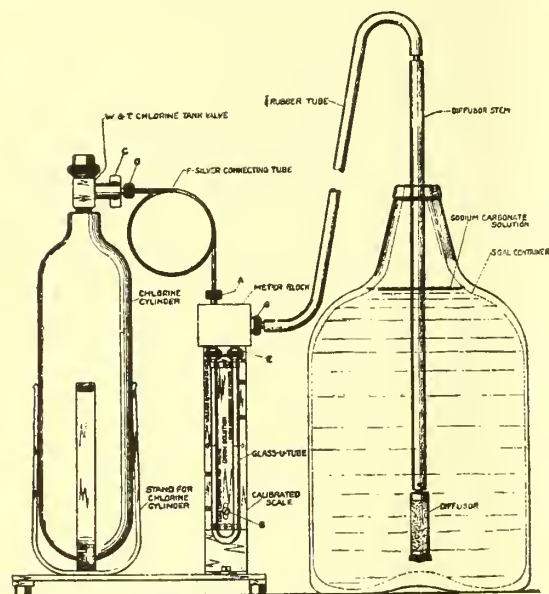
2. By action of chlorine gas on sodium carbonate: This method is simple and very satisfactory. The solution is prepared containing 15 gm. of dry sodium carbonate per liter (= 17.6 gm. monohydrate or 40 gm. washing soda) and a measured quantity of chlorine gas added by a Wallace and Tiernan apparatus. The orifice "6" is calibrated so as to give a definite quantity of Dakin's each minute. The quantities are indicated on the scale which is attached to the glass U tube, one point giving 500 c.c. solution per minute and the other 750 c.c. solution per minute. When the water



column in glass U tube is brought to the 500 c.c. mark and left there for one minute enough chlorin will be passed through the apparatus unto the sodium carbonate solution to make 500 c.c. Dakin's solution. The number of minutes that the chlorin should flow will be found by dividing the number of c.c. of solution in the graduate by the reading of the meter, or 500 c.c. in one minute, 1,000 c.c. in two minutes, etc. If solution is found too weak on titration add more chlorin, if too strong it should be diluted with 1.5 per cent. sodium carbonate.

## EXAMPLE

A. Eighteen gm.  $\text{Na}_2\text{CO}_3$  (or 17.6 gm., which is equivalent to 15 gm. of anhydrous) + 1,000 c.c. water. (Add  $\text{Na}_2\text{CO}_3$  to small amount of water to dissolve it before diluting to a liter.)



W. &amp; T. DAKIN'S SOLUTION APPARATUS

B. Run chlorin gas into this solution:  
1. Place Lundun diffuser at bottom of 1,000 c.c. graduate containing carbonate solution. 2. With Wallace and Tiernan meter run in a measured volume of chlorin. 3. With meter set at 500 it will take two minutes to make 1,000 c.c. Dakin's.

C. Test solution for alkalinity. (Previously described.)

D. Titrate 10 c.c. of Dakin's for hypochlorite concentration. (Previously described.) If reading was 13.4 c.c. N/10 sodium sulphite, look on scale or multiply c.c. N/10 thiosulphate  $\times 0.0372$  and you have 0.40 per cent. Dakin's

1. If reading was 10.5 c.c. N/10 thiosulphate, the per cent. is 0.38 sodium thiosulphate or too dilute to be antiseptic.

13.4 c.c. N/10 thiosulphate desired titer

10.5 c.c. N/10 thiosulphate amount present titer

2.9 c.c. N/10 thiosulphate amount required to make desired titer.

$$10.5 : 2.9 : : 2 \text{ minutes} : X$$

$X = 0.5$  of a minute more to run in chlorin. After the chlorin is added for 0.5 of a minute more, the titer is again made and with good technic you will get 13.4 c.c. or 0.49 per cent. Dakin's.

2. If excessive chlorin is added it is necessary to dilute with 1.5 per cent.  $\text{Na}_2\text{CO}_3$ .

Example: Titration after adding chlorin gas was 14.7 c.c. N/10  $\text{Na}_2\text{S}_2\text{O}_3 = 0.57$  per cent. Dakin's, which is too concentrated. To figure the volume of 1.5 per cent.  $\text{Na}_2\text{CO}_3$  to add, the following formulas are used:

$$1. \frac{\text{Present strength titer}}{\text{Desired strength titer}} \times \text{present volume} = \text{desired volume.}$$

2. Desired volume minus present volume = volume 1.5 per cent.  $\text{Na}_2\text{CO}_3$  to add substituting:

$$\frac{14.7}{13.4} \times 1,000 = 1,097$$

$$1,097 - 1,000 = 97 \text{ c.c. 1.5 per cent.}$$

$\text{Na}_2\text{CO}_3$  to add

Titrate after this dilution and result was 13.3 c.c. or 4.9 per cent. Dakin's.

3. By decomposing bleaching powder with sodium carbonate. Titration of bleaching powder: Bleaching powders vary considerably in their available chlorin contents, so that it is desirable to determine the available chlorin in each lot. Exceptional examples may contain as high as 35 per cent. available chlorin. Bleaching powders with less than 20 per cent. available chlorin should be rejected. The available chlorin content may be determined as follows: Exactly 10 gm. of bleaching powder, made up of small samples from different parts of the jar, in order to obtain a representative sample, are well shaken with a liter of water. After standing about 6 to 24 hours, the solution is filtered and a 10 c.c. sample of the filtrate is titrated in exactly the same manner as in the titration of Dakin's solution. In this case, the number of c.c. of decinormal thiosulphate required to decolorize, multiplied by factor 3.55 gives the percentage of active chlorin in the bleaching powder.

(3.55 = N/10 factor for available chlorin.) This factor is determined same as the N/10 factor (0.0372) for sodium hypochlorite. Example of available chlorin:

Ten gm. bleaching powder dissolved in 1,000 c.c. water and let stand twenty-four hours. Filter small portion and titrate 10 c.c. as Dakin's.

$$\begin{array}{r} \text{Titration: End } 14.87 - 24.40 \\ \text{Start } 5.4 - 14.85 \end{array}$$

$$(1) 9.45 \quad (2) 9.55$$

$$\begin{array}{l} 9.45 \times 3.55 = 33.5 \\ 9.55 \times 3.55 = 33.8 \end{array} \left. \begin{array}{l} \\ \end{array} \right\} \begin{array}{l} 33.6 \text{ per cent. chlorin} \\ \text{in bleaching powder.} \end{array}$$

Note: After available chlorin in lot is determined, the weights may be approximated from the following table:

TABLE FOR APPROXIMATELY 40 LITERS  
OF DAKIN'S

Active Chlorin in Bleaching Powder	Bleaching Powder in 5 Liters of Water	Sodium Carbonate in 5 Liters of Water			
Per Cent	Grams	Anhydrous	Monohydrated	Crystalline	Grams
20-26	800	600	700		1,600
28-34	600	420	490		1,140
36-42	500	335	380		900

Read table and dissolve the amounts of sodium carbonate opposite the percentage of available chlorin, found by analysis of sample, in 5 liters of water. Any factor of these amounts may be made up.

Pour the solution of sodium carbonate into the bottle containing the bleaching powder which has stood for several hours (twenty-four hours), shake well, and allow the precipitated calcium to settle. Test for complete precipitation of calcium by adding a few drops of carbonate solution to a few c.c. of the clear supernatant fluid. After half an hour siphon off the supernatant liquid through a filter paper with small amount of cotton underneath. This solution is strongly alkaline hypochlorite solution of about quadruple strength which will keep for several months. This solution may be held as "stock solution" and then neutralized and diluted for use in the following manner:

Titrate a sample 20 c.c. with 10 per cent. hydrochloric acid to absence of color with solid phenolphthalein.

Add more powdered phenolphthalein to make sure the decolorization was due to neutralization rather than to bleaching; then calculate the amount of acid required for the volume of filtrate it is desired to neutralize.

For example: If 20 c.c. of filtrate require 2 c.c. of 10 per cent. hydrochloric acid, 100 c.c. would require 10 c.c. and 8 liters of filtrate would require 800 c.c. of acid. This is to be added to the 8 liters (or volume of filtrate desired to neutralize) slowly, constantly agitating and testing small portions in a test tube with powdered phenolphthalein.

To this solution add the same volume "V" of 6.25 per cent. solution of sodium carbonate, or the equivalent amount of sodium bicarbonate.

Test a sample for alkalinity as directed above with both powdered and alcoholic phenolphthalein.

Titrate a 10 c.c. sample as Dakin's, but use 10 c.c. of iodid solution and 5 to 6 c.c. of acetic acid in titrating this concentrated hypochlorite solution.

Dilute the solution with tap water and verify the concentration by titrating a 10 c.c. sample as Dakin's.

The calculation is made as follows:

1.  $\frac{\text{Present strength titer}}{\text{Desired strength titer}} \times \text{present volume} = \text{desired volume.}$
2. Desired volume minus present volume = volume of water to add.

#### OUTLINE FOR METHOD

1. Titrate bleaching powder.
2. Place weighed amount of bleaching powder in measured volume of water.
3. Dissolve weighed amount sodium carbonate in measured volume of water.
4. After several hours or over night mix carbonate and bleaching powder solutions by pouring carbonate into bleach.
5. Test for complete precipitation of calcium.
6. Filter (slowly).
7. Neutralize a measured volume "V" to powdered phenolphthalein with dilute (N/10) hydrochloric.
8. Add an equal volume "V" of 6.25 per cent. bicarbonate solution.
9. Test alkalinity.
10. Titrate and dilute to desired strength.
11. Verify final concentration.
12. Titrate again every twenty-four to forty-eight hours.

Problem demonstrating method: Titration of bleaching powder for available chlorin gave 33.7 per cent. Making up one-tenth volume given in table.

Forty-two gm. of carbonate (anhydrous) in 500 c.c. water; 60 gm. of bleach in 500 c.c. water. Allow to stand twenty-four hours and then pour carbonate into bleach, shake vigorously and allow to settle and decant through a filter. Test filtrate with few drops of carbonate solution. Volume of filtrate = 980 c.c. Titrate filtrate (20 c.c.) which is alkaline hypochlorite to absence of color with 10 per cent. hydrochloric using powdered phenolphthalein as an indicator (add no water to 20 c.c. hypochlorite solution before titrating). Twenty c.c. filtrate required 1.2 c.c. of 10 per cent. hydrochloric—

6.0 c.c. for 100 c.c.

40.0 c.c. for 980 c.c.

which was slowly titrated testing small amounts in test tube with powdered phenolphthalein.

Now measure volume and add an equal volume of 6.25 per cent.  $\text{NaHCO}_3$  solution. Testing for alkalinity—

Powdered phenolphthalein = 0

Alcoholic phenolphthalein = flash

Titrate 10 c.c. of solution using two times the volume of potassium iodid and glacial acetic used when titrating Dakin's.

Titration = 22.0 c.c. N/10  $\text{Na}_2\text{S}_2\text{O}_3$

Figure desired volume.



$$\frac{\text{Present strength titer}}{\text{Desired strength titer}} \times \text{present volume} = \text{desired volume.}$$

$$\frac{22}{13} \times 1,960 = 3,317 = \text{desired volume}$$

Desired volume minus present volume = volume water to add:  $3,317 - 1,960 = 1,357$ , volume of water to add to approximate desired strength of titer (13) which is according to chart 0.48 per cent. Dakin's. Add 1,357 c.c. of tap water to present volume and verify the concentration by titrating a 10 c.c. sample.

Dakin's solution is not stable, being decomposed by light and heat. It should be covered with colored paper or cloth bags and kept in colored glass bottles or put in a dark place.

If necessary to distinguish Dakin's solution from many other antiseptics it may be colored with 1 c.c. of 0.5 per cent. potassium permanganate per liter.

Dakin's solution made up should be titrated every forty-eight hours for concentration.

Routine dressings: q24h.

1. Examine bacteriologic chart.
2. Put on rubber gloves.
3. Remove dressings (using surgical technic).
4. Take smears.
5. Test the tubes for occlusion of perforations, changing them only when not functioning.
6. Apply clean tubes and fasten them in place.
7. Apply gauze compresses around tubes.
8. Protect surrounding skin with vaseline compresses.
9. Apply Dakin compresses to wound.
10. Cover with dressing pad.

#### BACTERIOLOGIC EXAMINATION OF WOUNDS

1. Instillation of antiseptic should be interrupted at least two hours before the secretion is examined.

2. With a sterile platinum loop, scrape lightly the surface of the wound, selecting areas with necrotic tissue, exposed bone or tendon, mouths of sinuses or pockets, but avoiding the skin edges. Spread the secretion on a slide and label with the date and name of the patient, the antiseptic, and the number of the wound. Place the slides prepared during the round in a slide box.

3. In the laboratory, fix the smear with heat over a Bunsen burner; stain for two minutes with one of the following solutions; wash with tap water, and blot or allow to dry:

(a) Carbol thionin: 10 c.c. saturated solution thionin in 50 per cent. alcohol added to 100 c.c. 2 per cent. carbolic acid solution.

(b) Gentian violet: 0.8 c.c. of a standard solution of gentian violet in 95 per cent. alcohol added to 100 c.c. distilled water.

(c) Loeffler's methylene blue diluted as follows: Ten c.c. methylene blue (30 c.c. saturated alcoholic (95 per cent.) solution of methylene blue plus 100 c.c. potassium hydroxid solution 1:10,000) are added to 90 c.c. distilled water.

4. Counting the bacteria: Examine the preparation with the oil immersion lens; choose fields in which the leukocytes form a single layer and estimate the average number of bacteria per field. When there are less than 60 bacteria per field, 5 to 10 fields in different parts of the smear should be examined. When there is less than one bacterium per field, 20 to 30 fields should be examined. In smears apparently free from bacteria, a special search must be made for occasional phagocytes containing large numbers of organisms. The predominant type of organism should be noted (coccus, streptococcus, bacillus, etc.). No attempt is made to estimate the number of bacteria in excess of 60 per field, all such being designated as infinite.

5. Charting: The average number of bacteria per field is charted on a suitable chart (see inclusions). The examination is made routinely every second day.

6. Sources of error: Failure to select the worst part of wound, hemorrhage, dry scabs, phagocytosis, smears from skin edges, confusing debris.

Supplies used in hospital may be obtained from the following firms:

#### DRESSING MATERIALS

Gauze—Red Cross, Raritan, Bellevue; gauze and muslin bandage rolls, 1 yard wide; cotton, absorbent, Grades A and B; Johnson and Johnson, New Brunswick, N. J.

Cotton—Common, Sea Island Best, Nemo, Blue Bell, Griffin and Field, 331 Fourth Avenue, New York.

Linen—H. B. Claflin Corporation, 224 Church Street, New York.

Silk compresses (paraffin)—Good grade of India silk. One yard square will make fifty compresses. These are sterilized and dipped in a sterile paraffin mixture.

Turkish toweling—Department store.

Wooden clothes pins with springs—Department store.

Thread—Barbour's linen thread, Nos. 25 and 30—Department store.

#### SURGEONS' SUPPLIES

Syringes—Special urethral, Becton and Dickenson, Rutherford, N. J.

Rubber tubing—Maroon 7 mm. interior diameter, main tubes (45 $\frac{3}{4}$  feet, 12 tubes per pound). Maroon 4 mm. interior diameter, distributing tubes (1 pound makes 9 dozen 30 cm. tubes). Made by Faultless Rubber Company,

Ashland, Ohio, or Kny-Scheerer Company, 410 West Twenty-Seventh Street, New York.

Punch—Julius Bubecker and Sons, 15 East Twenty-Sixth Street, New York.

Pinch cocks— $2\frac{3}{8}$  inch, Lenz Apparatus Company, 11 East Sixteenth Street, New York.

Holland cord for Blake apparatus, Charles A. Robinson, 46 Beekman Street, New York.

Fracture frames, G. A. Massack and Company, 1021 Third Avenue, New York; also Kny-Scheerer Company, 410 West Twenty-Seventh Street, New York.

Impernapthane (American), manufactured by Reid Brothers, Vancouver, Canada; purchased from Kny-Scheerer Company, 410 West Twenty-Seventh Street, New York.

Cellophane (French), 16 Rue de Lourve, Paris.

Bacteriologic charts, Landsberg Brothers, 86 Fulton Street, New York.

#### APPARATUS

Nichrome loops for bacteriologic smears, Hoskins Manufacturing Company, 471 Lawton Avenue, Detroit, Mich. We buy the wire and handles and make the loops ourselves.

Glass apparatus including Kelly Infusion Jars (Reservoir for Dakin's solution).

Glass connecting tubes, etc., Physicians and Hospital Supply Company, 127 East Twenty-Third Street, New York; also Kny-Scheerer Company, 410 West Twenty-Seventh Street, New York.

Note: Size of glass tubes: Straight tubes, intake 7 mm., distributing 4 mm. inside diameter; Y tube, intake 7 mm., distributing 4 mm. inside diameter; 3 branch tube, intake 7 mm., distributing 3 outlets, 4 mm. inside diameter; 4 branch tube, intake 7 mm., distributing 4 outlets, 4 mm. inside diameter; Y connecting tube, inside diameter 7 mm. throughout.

Chlorin, Electro Bleaching Gas Company, 18 East Forty-First Street, New York.

Each pad is made with two layers of non-absorbent cotton covered with a layer of absorbent cotton, the whole being folded in a gauze cover. Pads Nos. 3 and 4 to be made about twice as thick as smaller ones.

The pads are made in the following sizes:

Cotton	Inches	Gauze	Inches
"A" 12 x 12 cm. ( 5 x 5)		20 x 31 cm. ( 8 x 12)	
"1" 15 x 25 cm. ( 6 x 10)		26 x 56 cm. (10 x 22)	
"2" 23 x 33 cm. ( 9 x 13)		31 x 74 cm. (12 x 29)	
"3" 33 x 53 cm. (13 x 21)		61 x 76 cm. (24 x 30)	
"4" 45 x 76 cm. (18 x 30)		56 x 162 cm. (22 x 64)	

#### ARTICLES USED WITH BLAKE-LYLE FRACTURE FRAME

Adhesive, spreaders, splints, hammocks, for thigh, 36 by 8; hammocks, for leg or arm, 24 by 6; hammocks, for forearm, 24 by 4; safety pins; Whitney clips (wooden clothes pins);

cords, looped at both ends, 28 inches; cords looped at one end, 1,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$  and 2 yards; weights, 1, 2 and 3 pound gun-shot; bags for weights, 6 by 6 and 8 by 8 (loop 1 inch); adjustable pulley.

#### SMALL RUBBER DISTRIBUTING TUBES

Tubes (4 mm. interior diameter) are cut in 30 to 40 cm. length. A certain number of tubes (1 inch) are open at the end with a lateral hole at side. The others are closed at one end by tying with a strong linen thread, and perforated from the same end to a length 5, 10, 15 and 20 cm. by means of a punch, making a series of holes ( $\frac{1}{2}$  mm. in diameter) perforating both walls at 1 cm. apart.

The following dimensions are used:

- "1" ..open tube with 1 lateral hole length 30 cm.
- "5" ..tied, perforated to 5 cm. length 30 cm.
- "10" ..tied, perforated to 10 cm. length 30 cm.
- "15" ..tied, perforated to 15 cm. length 40 cm.
- "20" ..tied, perforated to 20 cm. length 40 cm.

Covered tubes, closed tubes perforated 5, 10, 15 and 20 cm., the perforations covered with bath toweling stitched in place. A piece of linen thread (12 cm. long) is attached at distal end of the bath toweling.

"Loop tube," cut 70 cm. long punched to 10 cm. each side of center of tube.

425 Argyle Building.

#### REMINISCENCES OF SERVICE IN THE DIVISION OF PSYCHOLOGY U. S. ARMY\*

M. A. BLISS, M.D.  
ST. LOUIS

Psychoneuroses in line officer training camp work, where the neurologist lived in the camp the entire period of training, watched the men at drill, talked every day with the company commanders, saw the candidates at sick call and in the hospital, were rather certainly possible of identification; especially so if the so-called "effort syndrome" neurocirculatory asthenia was present. But in recruit depot work many conditions conspired to make such identification quite haphazard. It was usually the ambition of line commanders to make a record in numbers of men examined and equipped. This was reflected by feverish stress and haste in the examining barracks. The rapidity with which well trained and alert examiners could examine for hernia and hemorrhoids, bones and joints, teeth, vision and hearing, made one's head swim. It was the cardiovascular and tubercu-

\* Read before the St. Louis Medical Society, March 1, 1919.



losis examiners who saved our lives because fortunately their ears became raw from the pressure of the stethoscope, and their hearing dulled after a few hours' work to such an extent as to require rest. And if they happened to be hard to bluff, all expostulation on the part of the chief recruiting officer was without effect.

It is probable that even the cardiovascular and tuberculosis men let a good many unfit men slip by them. In sitting on the C. D. D. board, cases would appear for transfer that seemed all too apparent and neuropsychiatric examiners also at times must have suffered from "shell shock," for only blindness, deafness and dumbness could excuse us.

#### SHELL SHOCK

In April, 1918, Major Sanger Brown came to Camp Greenleaf with moving pictures of "shell shock" cases taken in English and French hospitals. Curiously enough we had on our ward in General Hospital 14 at that time, "point for point" cases that had never been out of Chickamauga Park during their soldier life and had not come in proximity of any shell but that of an oyster or mussel.

We had paralyses, contractures, deaf, dumb and blind, some showing angioneurotic edema; various spasmodic attacks simulating epilepsy, amnesias, anesthetics, and hyperesthesias. We reported them as "anticipatory shell shock," and the name seemed to have been an illuminating definition, for more medical officers began to question as to what constituted shell shock. (Not that the average medical officer learned very much as to the proper attitude toward these disabilities, which require long training for proper understanding and management.)

Before we got into the war, F. W. Mott the English neuropsychiatrist brought out a paper which perhaps did more to confuse than illuminate our minds on the causative factors in the nervous perturbations incident to modern war. He held that actual cellular damage was inflicted by the commotion of terrific explosions, even where no wound was discovered. In a small number of instances this was found to be true, but unfortunately the explanation was stretched to cover every conceivable hysteric, neurasthenic and fatigue neurosis. It was soon found that men with wounds rarely if ever had "shell shock"; that prisoners did not have it, and that the reactions were almost wholly psychic.

It was found that treatment was most successful near the front and that once a soldier was invalidated back to England or Canada he rarely recovered to a degree justifying his return to duty. It was escape from an intoler-

able situation and the subconscious mind, aided and abetted by the conscious mind, clung tightly to the protective disabilities as a drowning man does to straw. If boldly managed near the front under the influence of the team play of the military organization, a large number could be restored to duty and actually "made good."

#### PSYCHOLOGIC EXAMINATIONS

Under the direction of Major Yerkes, of the Surgeon-General's Office, definitely useful and interesting methods of determining mental quality were developed.

Instructions requesting close cooperation between neuropsychiatrists and psychologists were issued.

At Camp Greenleaf, under the direction of Capt. William Foster, a school for the training of psychologic examiners was conducted.

The first sifting of an organization was accomplished by group examinations, as many men as could be seated in a mess hall being examined at one time. The method consisted in giving each man a number of sheets bound together and lying face down, and a pencil. At a signal from the examiner the papers were turned over and the tests on the first page disclosed a square, overlaid by a circle, and a triangle. A cross was directed to be placed in the circle but not in the triangle, and in the square but not in the circle. A given number of seconds were allowed for the test and at command all pencils were required to be raised. Underscoring large and small numbers in columns of figures, rearranging disjointed sentences and proving understanding of them, the solution of simple mathematical problems, the memory for historic dates, the familiarity with well known American firms and their products, were other tests, each set of questions appearing on a separate sheet, disclosed only on signal, and a definite number of seconds or minutes allowed for solution.

This was known as the Alpha test. Scoring was done on a basis of 414. No one was expected to complete the test in the time given. Mental alertness, and power of adaptation were required for success. A score of 300 or above denoted superior intelligence, of 150 or below an inferior capacity.

The Beta test, for illiterates, consisted in requiring the men, also in a given time, to trace a line out of a maze, to estimate the number of blocks in a pile, to judge the heights and distances.

After the primary sifting those who dropped through the coarse sieve were given individual examinations by the Stanford-Binet or other standard tests of mental age and level.

In the rapid survey in draft work we de-

pended largely on questions directed to knowledge of native environment. It happened at times that the Surgeon-General's question, "Can the draftee earn his own living," and the results of mental tests, conflicted. Coal miners from the West Virginia mines earning \$7 a day could not pass the tests of seven years' mental age. An old cavalry officer who had been a sergeant for many years, "cussed me out" for recommending discharge of a soldier for mental deficiency (mental age of seven) and declared the man was the best stable boy in his troop.

The personnel office, the psychologists and neuropsychiatrists worked together on the sifting job and it is my belief that the government now has a more accurate and useful knowledge of the brain capacity of the men called than was ever before available, or which could be obtained in any other way.

#### LINE OFFICER TRAINING CAMPS

When it became necessary to expand our Army rapidly, there arose an urgent need for officers, which the War Department prepared to fill by careful selection and intensive training of the young men who flocked to the colors. While perhaps the majority of those who applied for admission were between the ages of 21 and 31, the first draft age, we had men up to 49. Before acceptance for admission to camp the candidates were required to conform to certain minimum educational requirements and were subjected to physical examination. Immediately after the training was begun all were reexamined. Camp Warden McLean in Chickamauga Park, a second series camp south of Oglethorpe, was assigned to me for neuropsychiatric examination in August, 1917. I am sure many men here were as much appalled on tackling their first army job as was I when I first faced the long line of naked men whom I had to examine neurologically and psychiatrically at the rate of forty or fifty an hour. With no scheme of any sort worked out, one had to go at the job hoping for the best and fearing the worst. I can say without fear of contradiction that this second series camp of 4,000 men was as fine a collection as were ever gotten together. Nearly 70 per cent. were college men, or, college graduates, and many had splendid technical training in addition. Lawyers, engineers (chemical, electrical, mechanical industrial), bank and trust company men, even a sprinkling of doctors who preferred the added risks and excitement of the line.

Splendidly equipped mentally and physically, full of enthusiasm and energy, intensely ambitious, they were anxious to present their very best front. At the same time, the great ma-

jority were candid in their replies even when such candor made acceptance doubtful.

Absolute democracy prevailed and, although many of our men were wealthy, there was no snobbishness. This camp, for instance, bought \$325,000 of Liberty Bonds and spent money so freely at the exchange that \$45,000 profit accrued in the three months' existence of the camp.

In spite of our lack of training in such work the first sifting disclosed twenty-six cases of syphilis of the nervous system, mostly tabes, one paresis, some cerebrospinal, and a few manic depressives and hyperthyroids. Three multiple sclerosis cases, two more cases of paresis and one dementia praecox developed during the progress of the camp. After observation of the group for three months, during the latter six weeks of which I attended every sick call, between 1.5 and 2 per cent. of the personnel of the camp were rejected for nervous and mental reasons. The nonorganic causes were largely psychoneuroses.

It seemed the policy of the camp to try every devilish device on the candidates to test endurance. First call sounded at 5:20 a. m., reveille at 5:30; mess, 5:50; sick call, 6:30; and then on through the day, drilling, trench digging, hiking, bayonet range, until at 9:15 p. m. the men tumbled exhausted on their cots. Dr. Ramsay Hunt at Fort Myer, officers' training camp, reported instances of fatigue which simulated paresis but I saw none at Warden McLean. I saw actual paresis develop but not the pseudoparesis Dr. Hunt described.

In addition to organic and functional nervous disease, a certain number of instances of psychologic inaptitude occurred. While no clearly defined affection of the nervous system could be named, the man could not be molded into an officer. What our final success was we have no way of knowing. From Surgeon-General's Office reports we shall know totals only.

#### RECRUIT DEPOT WORK

When in April, 1918, I had finished the third series officer training camp job I was asked to do a draft at the Depot Post of Fort Oglethorpe. The transition was startling. From the examination of highly intelligent, eager men to that of the average run of the Georgia and Alabama and East Tennessee draft, one had to quite reverse his methods. If one's questions were what the lawyers call "leading," a tale of spells, miseries, "hurtins," etc., poured out volubly. It was really astonishing how they survived the journey to the recruit depot!

When later I did two drafts totaling 10,000 or 12,000 men at Fort Thomas, Ky., I saw much of the same material, chiefly from the moun-



tainous districts of central Tennessee and Kentucky. It was a study in sociology—an appalling amount of total illiteracy and physical degeneracy. Sometimes rejections for nervous and mental reasons alone amounted to 20 per cent. Chief among these causes was feeble-mindedness, although dementia praecox was not rare. Multiple sclerosis was much more frequent than I expected. Syphilis of the nervous system ran in bunches and was, of course, more frequent from the neighborhood of cities although one or two such "bunches" were noted from remote country districts.

Nothing could convert one so readily to the idea of universal military training as the examination of these draftees. Many had never ridden any distance on a train until entrained for the place of mobilization, and I am sure a large number had never premeditatedly taken a bath. Their teeth were usually decayed and wholly neglected, the skin often muddy color, the nutrition poor. In the Southern groups one often thought of hookworm, for many were pallid and pot-bellied.

Where carefully selected there was, however, an astonishing change in the course of four to six weeks. Under the influence of bathing, feeding, drill, medical and dental supervision, and the ministrations of the barber, a lank, slovenly and illkempt mountaineer was transformed into an alert, erect, neat soldier, and I have no doubt that many of the unpromising looking subjects we took in so doubtfully made good in the final test on the Western front.

The local boards (peace to their memory) sent us, however, certain offerings which only my good friend Major Raithel could do justice to. That is to say, he could most vividly express himself about the personnel of a board which sent men who had to be returned in charge of an attendant, proving too dull or enfeebled to be trusted to make the journey home alone. Captain Dickey, the recruiting officer at Fort Thomas, rather broadly hinted that such instances made him suspect the brilliancy of the board.

Looking back over the experience of examining 5,000 officer candidates and 20,000 draftees and enlisted men, I cannot say that, as a medical experience, it was particularly instructive. But as a study in sociology, in the psychology of a great emergency, I am most glad to have helped on the job.

We made mistakes, lots of them, mostly I think in accepting when in doubt. But we did our "darndest," and succeeded in selecting a marvelously successful army.

The proof of the pudding is in the eating.

Humboldt Building.

## AN EARLY SIGN IN INFLUENZA (EPIDEMIC PNEUMONITIS)

DAN G. STINE, M.D.  
COLUMBIA, MO.

On examining the records of 300 cases of influenza admitted to the University Hospital before Dec. 30, 1918, in whom the first symptoms of the disease had developed within twenty-four hours of admission and in whom there were no physical signs of consolidation, the following sign was recorded so often that I have learned to look on it as diagnostic of beginning influenza.

In 83 per cent. of the cases mentioned above, there was a description of "cog-wheel inspiration," or "harsh inspiratory puff," in the record of their entrance examination. These terms were used to describe a physical sign met with on auscultation of the chest. On listening to the breath sounds over the chest, the examiner heard in the lower left back, left axilla, left apex, right apex, or right back (mentioned in the order of their frequency), an inspiratory sound more intense and harsh than over the rest of the chest and either broken into "cogs" (a series of inspiratory puffs) filling all the inspiratory phase, or the inspiratory sound was more intense and harsh than over the rest of the chest, but filling only part of inspiration and resembling a single harsh, short, puff. There are a few records of faint "cog-wheel inspiration" where the sound is not so intense but distant, and is due probably to the sound arising deep in the lung structure. *The expiratory sound is absent.*

As I have not encountered this sign in any other acute febrile disease, I look on its presence as important in diagnosing influenza during the present epidemic, which is of a milder form than that encountered last fall. It can be differentiated from the harsh breathing that precedes bronchial breathing over a beginning consolidation, by the absence of the expiratory sound. In bronchial breathing the blowing tubular sound appears first during expiration and as the sounds become more intense and harsh, inspiration and expiration are made up of two sounds of about equal intensity and length with a pause between.

Since Dec. 30, 1918, I have watched for this sign in all early cases of influenza and have seldom failed to find it.

University of Missouri.

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## INTERMEDIATE HOST OF LIVER FLUKE

M. Muto has found that the *Clonorchis sinensis* has a second intermediate host. The first host is a river or lake snail; the second host a fish. The species of snails and fish involved are described in his report in the *Japan Medical World*, Feb. 2, 1919.

# THE JOURNAL

OF THE

## Missouri State Medical Association

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MAY, 1919

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### EDITORIALS

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#### THE EXCELSIOR SPRINGS MEETING

The arrangements for the sixty-second annual meeting of the association to be held at Excelsior Springs, May 26, 27, 28 are practically completed and the program is published in this issue of *THE JOURNAL*. Some minor changes may be required in the order of the contributions to the scientific program but should this happen the members whose titles are affected will be notified of the change. The bound copy of the program will be sent to members contributing to the scientific session but not to the entire membership previous to the meeting. Bound copies will be on hand at the meeting so that all who attend will be supplied with a program.

As usual the House of Delegates will meet on Monday morning and continue in session during the entire day, with a recess for the meeting of the Judicial Council. On the night of Monday, May 26, we will hold our "Victory Session" when the service flag will be dedicated and opportunity given to members who have been in the service to relate their experiences.

The scientific program contains about forty papers, many of them dealing with problems growing out of the experiences of the medical officers in the great war.

On Tuesday night there will be a dance in the ball room of the Elms Hotel and other entertainments are being planned by the committee of arrangements for the pleasure of the members and their friends. Bring the ladies. Golf enthusiasts will find the links very attractive.

The county society secretaries will meet as usual on Tuesday afternoon at 3:00 o'clock in the gallery of the main dining room and the banquet for these "pillars of strength" in the organization will be given at 6 o'clock on the same evening at the same place. The councilors and other officers of the association are expected to attend this dinner which is always an occasion for fraternization and exchange of thought on the best methods of increasing the usefulness of the association.

All meetings of the association will be held in the ball room of the Elms Hotel. The regis-

tration bureau will be located in the lobby of the hotel and the exhibitors will show their goods on the veranda.

The meeting promises to be one of the best in our history and we hope the attendance will be the largest we have ever had at any meeting. At the Victory Session the members will be told of the excellent service rendered by Missouri physicians in the war, the number who were commissioned and how many of them were members of our association, the names of those who lost their lives in the service of their country and the special honors conferred on some of our members. We have learned of three members who were decorated with the Croix de Guerre and the Distinguished Service Medal—Dr. Fred T. Murphy of St. Louis, Commander of Hospital Unit No. 21, member of St. Louis Medical Society; Dr. George R. Dagg of North Kansas City, and Dr. Burton Maltby of Liberty, members of the Clay County Medical Society. If any members know of others who were cited for bravery and decorated we should be pleased to have the information sent to us before the meeting takes place.

The annual gathering of our association is an occasion that every member should feel it a duty to attend. Aside from the official proceedings and the scientific work of the meeting the gathering furnishes an opportunity for social and friendly contact where freedom from the care and worry of practice "knits up the raveled sleeve of care," renew old friendships and meet new members of the association. Members expecting to attend the meeting should write the hotels to reserve rooms for them.

Don't forget the place and the dates—Excelsior Springs, May 26, 27, 28.

#### HOTELS AND RATES

The Elms (headquarters), American plan, all rooms \$5 per day per person and two or more persons will be expected to occupy each room as there are not enough vacant rooms at this time to give a room to each member. Most of the rooms have private bath; those without private bath have toilet and washstand.

Snaps Hotel, American plan, room without bath, one person, per day, \$4; two persons, \$7.50. Room with bath, one person, per day, \$6; two persons, \$10. Additional charge for extra persons in room.

Royal Hotel, American plan, room without bath, one person, per day, \$3; two persons, \$6. Room with bath, one person, per day, \$4; two persons, \$8. Room with toilet, one person, per day, \$3.50; two persons, \$7. Additional charge for extra person in room, each \$2.50, \$3 and \$3.50 per day.

Lucerne Hotel, European plan, room with-



out bath, one person, per day, \$1.50; two persons, \$2.50. Room with bath, one person, per day, \$2; two persons, \$3. Additional charge for extra person in room, \$1 each per day.

Chadwick Hotel, European plan, room without bath, one person, per day, \$1; two persons, \$1.50. Room with bath, one person, per day, \$1.50; two persons, \$2. Additional charge for extra person in room 50 cents per day.

Ideal Hotel, European plan, room without bath, one person, per day, \$1; two persons, \$1.50. Room with shower bath, one person, per day, \$1.25; two persons, \$1.75.

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## BILLS IN THE LEGISLATURE

Next month we can present a résumé of the legislation affecting medical practice and the health of the people passed or defeated in the present session of the general assembly. The bill which is agitating the profession most seriously at present is House Bill No. 859, the principal clause of which reads as follows:

Section 8313, Article 1, Chapter 78 of the Revised Statutes of Missouri is hereby amended by striking out the word "reputable" in the fourteenth line thereof and by inserting in lieu thereof the words "legally chartered," so that said section when thus amended shall read as follows:

Section 8313.—All persons desiring to practice medicine or surgery in this state, or to treat the sick or afflicted, as provided in Section 8311 of this article, shall appear before the state board of health at such time and place as the board may direct, and shall there be examined as to their fitness to engage in such practice. All persons appearing for examination shall make application in writing to the secretary of the said board thirty days before the meeting. They shall furnish satisfactory evidence of their preliminary qualifications, to-wit: A certificate of graduation from an accredited high school or its equivalent or state normal school, college, university or academy. They shall also furnish satisfactory evidence of having received a diploma from some legally chartered medical college of four years' requirements at time of graduation.

This bill passed the house at a time when a large number of the members who were opposed to its adoption were absent. It is now in the senate where it is being vigorously opposed by the state board of health and the members of our association. On April 30 the Judiciary Committee held a hearing at which the arguments for and against the bill were presented. It is very evident that the persons who desire the change in the law affecting medical colleges are anxious to escape all supervisory control by the state board of health. If passed Missouri would at once become the dumping ground for

the graduates of all low grade medical colleges the history of which is such a black mark on the fair record made by progressive medical institutions throughout the nation. We cannot believe that the senate will countenance such a retrograde step as the passage of this bill would force on the state of Missouri and we hope that the upper house will refuse to concur in the passage of this exceedingly bad bill.

At this writing the following bills have been definitely killed: The optometry bill, the chiropractic bill, the bill limiting the charge for professional calls to \$1.50 and obstetrics to \$10, the bill requiring prescriptions to be written in English, the bill to control venereal diseases, introduced at the request of the United States Public Health Service.

The bill requiring physicians to fill in and file with the local registrar all death certificates within twenty-four hours after the death of the patient is still on the calendar for the third reading in the senate but was reported unfavorably in the house on March 24. We shall watch the progress of this measure and hope we can succeed in preventing its passage.

The bills to reorganize the state board of health have passed the house but their progress has been affected in the senate by the advocates of House Bill No. 859. The situation is a very complex one as some of the members are inclined to oppose the passage of the bills to increase the usefulness of the state board of health if the medical college bill is defeated. The board of health and the members of our association have taken a definite stand in this matter and will fight the passage of No. 859 every step. A large delegation of physicians from Kansas City and St. Louis attended the hearing before the Judiciary Committee in the senate on April 30.

The Workman's Compensation Bill has passed both houses and has been approved by the governor. We were not successful in having the provision incorporated permitting injured employees to select their own physicians without sacrificing their right of recompense, and the insurance companies succeeded in establishing competitive insurance instead of state insurance. As passed it is said the bill is entirely satisfactory to the laboring people and the employers also accept it. By the passage of this measure Missouri has placed itself in line with the modern method of protecting the injured employee and most if not all the damage suits instigated by "ambulance chasing" lawyers will be a thing of the past.

## MESSAGE TO MISSOURI MEDICAL SECRETARIES

The May meeting of our State Association is near at hand. One hundred counties in Missouri have medical societies, hence about one hundred secretaries. We earnestly hope that our department of organized medicine may not default at this particular time, therefore we earnestly urge your attendance at this meeting, and that you bring as many as possible of your members with you.

In America's superb advance we are justly proud that this is "reconstruction year." We have achieved with honor. We shall not procrastinate in this important stage of our history.

I need not remind you that for abundance of raw material and opportunity for unlimited service, the medical secretary figuratively holds the destiny of his society. Doubtless you realize that the medical secretary is supposed to be a "live wire." I cannot imagine a dead medical secretary. But if such should unfortunately be let us try to resuscitate him. But let us not boast; heaven smiles as beautifully for the member who persists in being the last one to pay dues.

Let every secretary come to the May meeting, prepared to tell us how to lay down a successful barrage. If you miss this meeting, you will certainly grope through the rest of the year in ignorance of the best ideas to be had, and your society will reflect your zeal. Watch THE JOURNAL. The program will be free for all. The war is over, and "Blighty" has no bed for the wide-awake medical secretary.

JOHN J. GAINES, M.D.,  
President Medical Secretaries.

## MORE EXTENSIVE USE OF DIPHThERIA ANTITOXIN

We have in the adequate early use of antitoxin a sure cure for diphtheria. The fact remains, however, that there are still many deaths occurring from this disease. Failure to send for a physician until several days have elapsed since the beginning of the disease, absence of typical membrane on the tonsils or uvula, failure to recognize nasal manifestations, wrong supposition that the attack is simple croup, delay in waiting for a case to become typical, a further twenty-four hour wait for confirmation by culture—all these factors of delay are encountered by one who sees the pitiable victim of neglected diphtheria, already hopelessly toxic and in a few hours moribund.

Diagnosis is no doubt at times difficult, but as a means of reducing the death rate there should be changes in some of the practices regarding antitoxin administration.

1. No package of less than 5,000 units should be obtainable for therapeutic use, and 10,000 units given on the first day would in most instances make it needless to give a second dose. The subcutaneous administration should be replaced by the intramuscular or the intravenous.

2. Diphtheria is essentially a public health problem and has a preventable mortality and for that reason antitoxin should be absolutely free to all citizens. Physicians have wrongly waited to use it in certain cases because they were not absolutely sure and because the use of the antitoxin meant an additional expense to the family. Free antitoxin would remove this excuse for delay.

3. It is far better to use the serum at once, while waiting for laboratory confirmation, than to reach the fatal period when no benefits can be attained by its use. Anaphylaxis is such a rarity and is of so little importance as compared with the injury produced by diphtheria toxin that it can be disregarded.

Therefore let us urge that the present inadequate and dangerously small packages of antitoxin be discontinued; that the state of Missouri follow the example of numerous commonwealths in providing free antitoxin for every case; and that physicians be expected to use the serum early in all doubtful cases as well as in positive cases in sufficient dosage.

F. C. N.

## PHYSICIANS CAN HELP DISABLED SOLDIERS AND SAILORS

Notwithstanding the wide publicity given to the government plans for rehabilitating injured soldiers and sailors the Federal Board for Vocational Education says there is an astonishing number of these men out in civil life badly handicapped by their injuries but endeavoring nevertheless to work. The board desires to locate disabled men who have not been informed of the assistance that the government offers them so that they may receive the benefit of the facilities that have been established to train them. Physicians will undoubtedly see many of these men so we are asked to urge our members to explain to the soldiers and sailors what the government is offering to do for them, whenever such a case comes to our notice. The government is resolved that every disabled soldier and sailor shall know:

That if his disability prevents him from returning to employment without training and he elects to follow a course of vocational training provided by the federal board, the course will be furnished free of cost, and he will be paid as long as the training lasts a monthly compensation equal to the sum to which he is entitled under the War-Risk Insurance Act or a sum



equal to the pay of his last month of active service, whichever is the greater, but in no case will a single man or a man required by his course of instruction to live apart from his dependents receive less than \$65 per month, exclusive of the sum paid dependents; nor will a man living with his dependents receive less than \$75 per month, inclusive of sum paid to dependents.

That if his disability does not prevent him from returning to employment without training and he elects to follow a course of vocational training provided by the federal board, the course will be furnished free of cost to him, and the compensation provided by the War-Risk Insurance Act will be paid to him, but no allowance will be paid to his family.

That if he is willing to learn and to take advantage of the opportunities to increase his skill offered him by the federal board he can usually get a better position than he had before entering the service.

That if he fails to take advantage of these opportunities he will find himself badly handicapped when he is obliged to compete with the able-bodied men who come back to work after the war.

That the federal board, through its vocational experts, will study his particular disability and advise him as to the proper course to pursue and give him free training for the occupation best suited to him.

The government cannot impose this service on the men against their will as the acceptance of the training is wholly optional with the disabled men. It must be due to a lack of knowledge of the wonderful opportunities that this training will open to the disabled soldier which prevents any of them from taking advantage of the offer. Physicians are urged to encourage any of these men coming under their notice to communicate with the Federal Board of Vocational Education, Washington, D. C., or with the district office for men living in Missouri, 517 Chemical Building, St. Louis.

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### NEW MEDICAL CLINICS

A new medical publication made its appearance early in this year under the name of *Quarterly Medical Clinics*. It has been established for the purpose of providing a medium of circulation for the work done at Augustana Hospital, Chicago, by Dr. Frank Smithies in response to the request of students and physicians for the preservation of his clinics and lectures in a "more substantial form than loose mimeographed sheets." This volume contains fifteen cases of varied conditions, more or less met with in the practice of successful physicians, all of them being described with considerable

detail, great clarity and, where needed, a liberal discussion of the findings. The book is splendidly bound and printed in clear and readable type on a grade of paper that makes reading a pleasure. Illustrations are numerous and, for the most part, printed on calendered paper that brings out the fine points. It is published by the Medicine and Surgery Publishing Company, St. Louis; single copies, \$1.50; annual subscription, \$5.

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### NEWS NOTES

DR. FRANCIS L. REDER of St. Louis read a paper before the Adams County Medical Society, Quincy, Ill., on Monday, April 14, entitled, "Vascular Tumors."

DR. N. C. ACREE of Myrtle spent several weeks in a hospital at Springfield recently, due to a fractured femur. He is convalescing and has returned to his home.

A PHYSICIAN is needed at Fiftysix, Ark., and we have been asked to let our members know of the need at that point. Those who may be interested should address Reva N. Newcomb, General Merchant, Fiftysix, Ark.

ON entering his office April 1, Dr. W. W. Duke, Waldheim Building, Kansas City, discovered that a thief with discriminating tastes had broken into the suite and appropriated some microscopes, a couple of valuable rugs and miscellaneous articles worth in the neighborhood of \$1,000. It was not an April fool joke either.

IN the *Journal of the American Medical Association*, April 5, we note the announcement of the death of Lieut. George W. Goins of Toole, Utah, who died at Jefferson Barracks, March 14. Before going to Utah several years ago Dr. Goins resided at Breckenridge, Mo., and was for many years secretary of the Caldwell County Medical Society.

MATERNITY hospitals and homes for infants and children will be licensed and placed under the supervision of the State Board of Charities and Corrections if the bill passed by the house of representatives is enacted. Another bill passed by the house makes it a misdemeanor for persons to contribute to the delinquency of children. The bills are part of the children's code introduced by the Children's Code Commission. The house has also passed the model bill prepared by the United States Public Health Service for the control of venereal diseases.

THE United States penitentiary will probably be the domicile of Drs. J. H. and U. S. G. Hughes of Kansas City for the next four years where they will have time to ponder over their escapades while dodging the police and courts during the past few years. They were arrested in January, 1916, and convicted in November, 1917, for violation of the anti-narcotic law but have evaded prison through the many technicalities that resourceful lawyers often find in legal procedure. The final appeal to the United States supreme court has been denied and it is said that they will now be compelled to serve their sentences. They were convicted on nine separate counts the total period of the sentences for one being seventy-six years and for the other forty-four years. Both terms were permitted to run concurrently so they will actually serve only four years.

THE American Year Book for 1918 just published records the events of the year which are regarded by experts as the most permanent in value and most likely to answer the questions of searchers. A liberal space is accorded to the developments in medical science and among the contributors to this department is Dr. M. G. Seelig of St. Louis, professor of surgery St. Louis University Medical School, who wrote the article on surgery. Another St. Louisian, B. M. Duggar, professor of plant physiology Washington University, contributed the article on botany. The advisory board under whose direction the year book is prepared annually consists of forty members of learned national societies, the medical profession being represented by Dr. Alexander Lambert, professor of medicine Cornell University, representing the American Medical Association; Dr. Samuel J. Meltzer of the Rockefeller Institute, representing the American Physiological Society, and George T. Moore, professor of applied botany Washington University, representing the Botanical Society of America.

Visit the display by the exhibitors at our annual meeting. The following reliable firms will have interesting exhibits:

A. S. Aloe Company, St. Louis, surgical instruments.

Borden Condensed Milk Company, New York, malted milk.

Hettinger Brothers Manufacturing Company, Kansas City, Mo., surgical instruments.

Horlick's Malted Milk Company, Racine, Wis., malted milk.

Hynson, Westcott & Dunning, Baltimore, pharmaceuticals.

Mead, Johnson & Co., Evansville, Ind., food.

Medical Protective Company, Fort Wayne, Ind., indemnity insurance.

Mellin's Food Company, Boston, food.

Mosby Book Company, St. Louis, medical books.

Physicians' Supply Company, Kansas City, Mo., surgical instruments.

G. H. Sherman, Detroit, vaccines and serums.

E. R. Squibb & Sons, New York City, pharmaceuticals.

Thompson-Plaster Company, Leesburg, Va., electrical appliances.

## MEMBERSHIP CHANGES

### NEW MEMBERS

Adams, William T., Richards.

Bolton, Benjamin Meade, St. Louis.

Bowers, Joseph Samuel, Granby.

Braun, Harry E., Independence.

Brookes, Henry S., Jr., St. Louis.

Bryan, E. M., Fulton.

Chapman, Thomas E., Joplin.

Compton, James Roy, St. Louis.

Edmonson, John L., Stella.

Farrell, R. F., Conception Junction.

Findley, William Joseph, Graham.

Foster, Robert L., St. Louis.

Funkhouser, Paul, St. Louis.

Hayman, Arista T., St. Louis.

Hunterson, D. J., Ravenwood.

Kelly, Joseph P., Kansas City.

Kring, Elbert V., St. Louis.

Maness, Charles Edward, Neosho.

Martin, Charles Francis, Kansas City.

Morse, Frank L., St. Louis.

Pollard, M. M., Barnard.

Porter, William Avin, Higginsville.

Sale, Onal Arthur, Neosho.

Thompson, F. E., Higginsville.

Thornton, Robert A., Joplin.

Werner, Joseph P., Marshfield.

### CHANGES OF ADDRESS

Barnes, J. N., 404 Union Oil Bldg., Los Angeles, Calif., to No. 11, Long Beach.

Bauman, Charles M., 5046 Vernon Ave., St. Louis, to 2606 Union Blvd.

Bryan, R. S., 1425 Boatman's Bank Bldg., St. Louis, to 5461 Delmar Ave.

Burton, P., Louisiana to New Hartford.

Callaghan, Richard, 6900 Washington Park Blvd., Kansas City, to 647 Elmwood.

Carley, H. D., 3332 Bell Ave., St. Louis, to 1421 a Belt Ave.

Clendenen, Logan, not definite, to 1025 Rialto Bldg., Kansas City.

Coffey, William H., 635-637 Lathrop Bldg., Kansas City, to 607 Shukert Bldg.



Cope, Paul Francis, 1220 Rialto Bldg., Kansas City, to 4025 Central.

Dawson, Lerton V., New Donohoo Bldg., Plainview, Texas, to 703 Lathrop Bldg., Kansas City.

Ferguson, Arthur D., Hunnewell to Fulton.

Guhman, C. N., 4298 Finney Ave., St. Louis, to 527 Delmar Bldg.

Henke, C. F., 1823 Menard St., St. Louis, to N. W. Cor. Tenth and Geyer.

Hiller, Frank B., Westover Bldg., Kansas City, to Pinckneyville, Ill.

Hudson, D. O., Arlington Heights, Mass., to Montgomery City, Mo.

Kneale, E. Ellsworth, City Infirmary, St. Louis, to Isolation Hospital, 5600 Arsenal St.

Kuhn, Daniel, 1746 Chouteau Ave., St. Louis, to 4583 Forest Park Blvd.

Link, Edward X., 3550 Russell Ave., St. Louis, to 4103 Shenandoah.

Lyle, C. F., Boonville to Hume.

Maxey, Silas Waldeck, 416 W. Rout, Pueblo, Colo., to 225 W. Eighth St.

McGhee, H. E., 725 Paseo, Kansas City, to Argyle Bldg.

Mitchell, Ernest, Lamonte to Monett.

Muller, Carl J., Vandeventer and Evans Aves., St. Louis, to 4826 Delmar Ave.

O'Connell, John, 3752 Pine Grove Ave., Chicago, Ill., to Pomeroy, Iowa.

Poe, Chester A., Fruitland to Bloomfield.

Proetz, Arthur W., 5415 Bartmer Ave., St. Louis, to 5330 Pershing Ave.

Reyling, F. T., 409 Argyle Bldg., Kansas City, to 1220 Rialto Bldg.

Rising, Dean S., 5623 St. John Ave., Kansas City, to 103 N. Elmwood.

Scherer, P. H., 1701 a S. Broadway, St. Louis, to 3102 a S. Grand Ave.

Schmidt, I. H., City Hospital, St. Louis, to 4015 Connecticut St.

Schreiber, Louis W., Missouri Athletic Club, St. Louis, to 505 University Club Bldg.

Simon, F. C., 615 Wall Bldg., St. Louis, to 816 Frisco Bldg.

Strieby, Ulysses G., Syracuse, Ind., to Brownington, Mo.

Tate, P. S., 1134 E. Forty-Seventh St., Chicago, Ill., to 917 E. Forty-Seventh St.

Threadgill, J. M., 1234 Sutter Ave., St. Louis, to 5769 Westminster Place.

Witten, Henry O., 5447 Prospect Ave., Kansas City, to 3626 Independence Ave.

Wolf, I. J., 417 Argyle Bldg., Kansas City, to 1334 Rialto Bldg.

Young, H. McClure, 911 Third National Bank Bldg., St. Louis, to 624 University Club Bldg.

#### TRANSFERRED

Campbell, W. M., Vinita, Okla., from Newton County Medical Society, to Vinita, Oklahoma County Medical Society.

Cannon, J. Sawyer, Baxter Springs, Kan., from Newton County Medical Society, to Kansas Medical Society.

#### DROPPED

Connaway, John W., Columbia.

Gray, Albert N., Burlington, Kan.

Heryford, Jacob R., Sabetha, Kan.

Mayes, O. B., Centralia.

McCulley, James, Dixon.

Miller, Walter McNay, Columbia.

Muns, Walden E., Columbia.

Ricketts, Floyd B., Leslie.

Titterington, J. L., Richland.

Todd, William T., Liberal, Kan.

#### DECEASED

Crum, J. A., Marion.

Dines, George Lee, Fredericktown.

Hogan, Joseph L., Oregon.

## MISCELLANY

### HEALTH OF WORLD IS THE AIM

AMERICAN SPECIALISTS SAIL FOR FRANCE TO PARTICIPATE IN RED CROSS INTERNATIONAL PLANS

A party of eminent specialists in matters relating to public health sailed from New York on the steamship *Leviathan*, Saturday, March 15, to participate in the conferences that are to precede the International Red Cross Convention called at Geneva, Switzerland, thirty days after the signing of the final peace treaty. The attendance of these American health and medical experts at the European conferences was arranged for by Dr. Livingston Farrand, chairman of the Central Committee of the American Red Cross, who is now in France.

Members of the American delegation are Dr. F. D. Talbot, Boston, child health specialist; Dr. L. Emmett Holt, New York City, child health specialist; Col. F. F. Russell, Army Medical Corps, detailed by the chief of staff for service in connection with the special medical mission; Dr. William H. Welch, Baltimore, director of the School of Hygiene and Public Health, established by the Rockefeller Foundation of Johns Hopkins University; Dr. Samuel M. Hamill, Philadelphia; Dr. Herman M. Biggs, New York City, widely known through his work as health commissioner of the state of New York; and Dr. E. R. Baldwin, Saranac Lake, N. Y., director of the Trudeau Foundation.

The preliminary international conferences are to take place in Cannes. There the Americans will meet experts from the various other countries that are taking the initiative with respect to the Geneva convention, and it is expected that when the convention starts a comprehensive report will be ready for presentation relative to plans for safeguarding the health of the world through the cooperative scheme that is the basis of the new Red Cross project.

## GENERAL PERSHING THANKS THE MEDICAL CORPS

Following is the copy of a letter dated Feb. 20, 1919, from the commander-in-chief of the American Expeditionary Forces to Col. Walter D. McCaw, M. C., chief surgeon, A. E. F.:

*My Dear Colonel McCaw:*

Now that active operations are at an end, and many officers and enlisted personnel are preparing to sever their connection with the military forces and return to civil life, I desire to express my personal appreciation and thanks and that of your fellow members of the American Expeditionary Forces to you, and through you to the members of your department, for the splendid services they have rendered.

At the front and in the long chain of hospitals extending down to the base ports, I have watched the fine and unselfish character of their work, and the achievements which have added new glory to the noble professions they have so ably represented. Many of them have shared with the line troops the hardships of campaign conditions and have sustained casualties and privations with fortitude that is beyond praise. No labor has been too exhausting and no danger too great to prevent their full discharge of duty.

A special word of thanks is due to those members who were attached to and served continuously with the armies of our Allies. Their efficiency and high ideals have called for the highest praise of the allied governments under whom they have served.

Before they leave France, will you convey to all ranks under your command the deep sense of my personal appreciation of their splendid services and my regret at the impracticability of sending each and every one of them a letter of thanks?

Sincerely yours,

JOHN J. PERSHING.

—*Journal of the American Medical Association*,  
March 29, 1919.

## THE FITZSIMMONS MEMORIAL HOSPITAL

At a recent meeting of the officers, councillors and committee on legislation of the Kansas State Medical Society, resolutions were adopted urging the legislature to approve the recommendations of the State Board of Administration, which, if approved, would provide the ways and means for the proper development of the School of Medicine of the University of Kansas.

Through these resolutions the organized medical profession is giving voice to a demand for better facilities to treat the sick poor of the state and train our young men and women in the more useful of the professions, the modern physician and the trained nurse which demand has been too long delayed and the merits of which have been too tardy of recognition.

The resolutions follow:

Recommendations of the President, Councillors and Committee of the Kansas State Medical Society, to the Governor, the Senate and the House of Representatives of the State of Kansas:

We, the undersigned committee of the Kansas State Medical Society, respectfully present the following recommendations to the governor, the senate and the house of representatives of Kansas:

1. Upon no other profession or class of men have the burdens and sacrifices necessitated by this war fallen so heavily as on the medical profession. The first request of the allies after the United States

entered the war was for one thousand physicians. The first American army officer killed was Lieut. William Thomas Fitzsimmons, a graduate of the School of Medicine of the University of Kansas. We therefore believe that in recognition of these facts the state should give consideration to the wishes and needs of the medical profession, which ultimately are for the best interests and health of the people: *We therefore recommend*, that a hospital be erected as a memorial to the first American army officer killed in France—Lieut. William Thomas Fitzsimmons, M.D.

2. *We therefore recommend*, that the state build and support a hospital, or hospitals, to care for crippled and deformed children, acute surgical and medical cases and maternity patients who may require attention. We believe that this work could be done most economically and efficiently in connection with the School of Medicine of the University of Kansas, which has been doing this kind of work and which has the organization and staff to care for it.

3. *We also hold*, that the war and influenza epidemic have emphasized the necessity of the state's maintaining and adequately supporting its hospitals, its School of Medicine, its Training School for Nurses (including public health nurses), and its laboratory for the diagnosis of venereal diseases.

4. *We further state*, that the chairman of this committee has personally visited the hospital and laboratories of the School of Medicine at Rosedale and investigated the situation there; and on his report, this committee desires to recommend that appropriations be made at this session of the legislature for the following urgently needed purposes:

(a) The purchase of additional ground in Rosedale, so that a complete plant may be erected.

(b) The erection of a heating plant and power house.

(c) The erection of a hospital with suitable accommodations for the kinds of cases mentioned above, including crippled and deformed children, such hospital to be known as The Fitzsimmons Memorial Hospital.—*Kansas State Medical Journal*.

## HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY

Abramopoulos, C. A., Kansas City; Allee, Warren L., Eldon; Allison, Nathaniel, St. Louis; Arnold, U. S. G., Portage des Sioux; Atchinson, C. H., Waldron.

Bailey, F. W., St. Louis; Baerens, Oscar F., St. Louis; Barker, F. C., Kansas City (Navy); Barnes, Francis M., St. Louis; Barnard, C. A., Portage des Sioux; Bauman, C. M., St. Louis; Baysinger, S. L., Rolla; Bedford, S. V., Jefferson City; Berry, J. W., Cape Girardeau; Blair, Vilray P., St. Louis; Blank, O. E., St. Louis (Navy); Bliss, Malcolm A., St. Louis; Boehm, E., St. Louis; Bogard, Edward, Lillbourn; Brashear, H. C., St. Louis; Breyfogle, H. A., Kansas City; Brown, Charles H., Fair Play; Burdick, J. J., St. Louis; Butler, J., Blackwell.

Carpenter, G. W., Utica; Castelow, R. E., Kansas City; Chaffin, W. F., Raymore; Clabaugh, O. W., Sedalia; Clapsaddle, C. J., St. Louis; Clausen, S. W., St. Louis; Clithero, William H., St. Louis; Cole, B. C., DeWitt; Conrad, C. L., Pleasant Hill; Crank, A. C., Canton; Creveling, H. Clay, St. Louis.

Dargatz, F. E., Kansas City; Dean, J. M., St. Louis; Dean, W. T., St. Louis; De Honey, F. R., Fredericktown; Deppe, A. H., St. Louis (Navy); Dieckman,



W. C., Dexter; Drace, C. C., Holcomb; Draney, T. L., St. Louis; Dripps, Roy C., St. Louis; Drisdell, T. J., Dadeville.

Edler, William A., St. Louis; Elam, W. T., St. Joseph; Eudy, W. T., Birch Tree.

Fleming, T. S., Moberly.

Gettys, S. L., St. Louis; Goodman, S., Kansas City (Navy); Goodrich, H. A., Webster Groves; Gray, Isabel S., St. Louis; Griffith, E. M., Creighton; Groit, A. J., St. Louis.

Hall, E. P., Kansas City (Navy); Harnagel, F. H., St. Louis; Hawkins, G. W., Salisbury; Hedges, F., Pattonsburg; Heiple, Edward E., St. Louis; Herchenroeder, Louis C., St. Louis; Heuer, S., St. Louis; Heuman, George W., St. Louis; Hoel, W. M., Lockwood; Hofmann, O., Kansas City; Holbrook, R. W., Kansas City (Navy); Homan, J. S., St. Louis; Horst, O. C., Springfield; Hurwitz, F., Kansas City.

Johnson, E. Horrace, St. Louis; Jones, Willis G., Sedalia; Jungk, Carl G. M., St. Louis.

Kelly, C. A., St. Louis; Koenig, George W., St. Louis; Kowalsky, E. I., St. Louis.

Lamar, F. C., Kansas City (Navy); Lippe, Meyer J., St. Louis; Lockwood, W. E., Potts; Long, Frank B., Sedalia; Lonsway, Maurice J., St. Louis; Luedde, William H., St. Louis; Lund, Herluf G., St. Louis; Lyter, J. C., St. Louis.

Major, Hermon S., Fulton; McCarty, V. W., Kansas City; McClure, T. C., St. Louis; McIntire, J. C., St. Louis; Miller, I. H., Louisiana; Mills, J. W., Owensville; Mills, R. F., Odessa; Montague, Herbert L., St. Louis; Moody, E. E., Joplin (Navy); Moore, E. M., Corder; Murphy, John P., St. Louis.

Neunlist, P. C., Old Monroe; Nieweg, G. A., Van-cleve.

O'Connell, John, St. Louis; O'Kelley, H. T., Patton; Owens, J. L., Kansas City.

Parsons, C. W., Sweet Springs; Pierpont, J. E., Skidmore; Postlethwaite, F. M., Kansas City; Post, M. H., Jr., St. Louis; Post, W. B., Carthage; Potter, C. A., St. Joseph.

Ragsdale, T. J., Lee's Summit; Rogers, F. B., Kansas City.

Savage, H. G., Warsaw; Schisler, Edwin J., St. Louis; Schuck, P., St. Louis; Schwab, Sidney I., St. Louis; Scott, A. G., Cardwell; Sewing, A. H., St. Louis; Sheets, R., Orrick; Shelby, M. H., Charleston; Shreffler, A. R., St. Louis; Shuck, L. I., Nelson; Skinner, J. O., Kansas City (Navy); Slaughter, F. M., St. Louis; Sneed, C. M., Columbia; Spencer, F. B., Hannibal; Spivy, R. M., St. Louis; Starks, J. C. Gower; Steinle, G. H., St. Louis.

Thompson, J. C., St. Louis; Toney, L. E., Piedmont; Tyree, J. I., Kansas City (Navy).

Unsell, J. B., Louisiana.

Van Cleve, J. D., Malden.

Wainright, A. G., St. Louis; Wall, H. M., Windsor (Navy); Weston, Ursa C., Osgood; Wiener, M., St. Louis; Weiss, William, St. Louis; Wiley, R. E., Sikeston; Wilhelm, O. J., St. Louis; Wilhite, G. O., St. Louis; Wilkes, Benjamin A., St. Louis; Winn, R. M., Hannibal; Woodruff, F. E., St. Louis; Wright, C. G., St. Louis.

Yahlem, N. N., St. Louis; Young, H. McClure, St. Louis; Yount, W. E., Cape Girardeau.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1919

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Dec. 14, 1918.

Webster County Medical Society, Dec. 23, 1918.

Cedar County Medical Society, Dec. 30, 1918.

Pike County Medical Society, Jan. 8, 1919.

Vernon County Medical Society, Jan. 20, 1919.

Chariton County Medical Society, Jan. 25, 1919.

Wayne County Medical Society, Feb. 12, 1919.

Camden County Medical Society, Feb. 14, 1919.

Atchinson County Medical Society, Feb. 26, 1919.

Ralls County Medical Society, Feb. 27, 1919.

Ste. Genevieve County Medical Society, Feb. 27, 1919.

Nodaway County Medical Society, March 24, 1919.

Laclede County Medical Society, March 31, 1919.

Oregon County Medical Society, April 7, 1919.

Cass County Medical Society, April 16, 1919.

Adair County Medical Society, April 17, 1919.

## Missouri State Medical Association

Sixty-Second Annual Meeting, Missouri State Medical Association, Excelsior Springs, May 26, 27, 28, 1919

### PROGRAM

#### HOUSE OF DELEGATES

FIRST DAY—MONDAY, MAY 26, 1919

BALL ROOM, ELMS HOTEL

House of Delegates called to order at 9:30 a. m.

Roll call.

Reading of minutes of previous meeting.

Reading of President's message and recommendations.

Appointment of Committee on Nominations.

Report of Committee on Arrangements.

Report of the Judicial Council.

Report of Secretary.

Report of Treasurer.

Report of Committee on Scientific Work.

Report of Committee on Health and Public Instruction.

Report of Defense Committee.

Report of Committee on Medical Education.

Report of Committee on Constitution and By-Laws.

Report of Committee on Cancer.

Report of Committee on Blindness.

Report of Committee on Vaccination.

Report of Committee on Expert Testimony.

Report of Committee on Necrology.

RECESS TILL 3 P. M.

Report of Judicial Council.

Reports of Reference Committees.

Reading of Resolutions, Memorials, etc.

Report of Committee on Nominations.

Election of President.

Selection of place of next meeting.

Miscellaneous business.

**JUDICIAL COUNCIL**

MONDAY, MAY 26, 1919—1 P. M.

BALL ROOM, ELMS HOTEL

1st District.....	E. L. Crowson, Pickering
2d District.....	C. R. Woodson, St. Joseph
3d District.....	G. W. Whiteley, Albany
4th District.....	J. B. Wright, Trenton
5th District.....	J. R. Bridges, Kahoka
6th District.....	P. F. Cole, Ewing
7th District.....	J. D. Smith, Shelby
8th District.....	L. W. Cape, Maplewood
9th District.....	A. R. McComas, Sturgeon
10th District.....	D. A. Barnhart, Huntsville
11th District.....	G. W. Hawkins, Salisbury
12th District.....	Spence Redman, Platte City
13th District.....	Franklin E. Murphy, Kansas City
14th District.....	C. T. Ryland, Lexington
15th District.....	H. S. Crawford, Harrisonville
16th District.....	E. N. Chastain, Butler
17th District.....	W. J. Ferguson, Sedalia
18th District.....	J. P. Burke, California
19th District.....	S. V. Bedford, Jefferson City
20th District.....	A. H. Hamel, St. Louis
21st District.....	G. M. Rutledge, Ste. Genevieve
22d District.....	G. S. Cannon, Farnfeld
23d District.....	J. H. Timberman, Marston
24th District.....	Frank Hyde, Eminence
25th District.....	O. A. Smith, Farmington
26th District.....	J. A. McComb, Lebanon
27th District.....	J. C. B. Davis, Willow Springs
28th District.....	T. O. Klingner, Springfield
29th District.....	R. L. Wills, Neosho

**GENERAL MEETING**

VICTORY SESSION

BALL ROOM, ELMS HOTEL

MONDAY, MAY 26, 1919—8 P. M.

Dedication of Service Flag	Herman E. Pearse, M.D., Kansas City
Base Hospital No. 21	Borden S. Veeder, M.D., St. Louis, and Arthur W. Proetz, M.D., St. Louis
Base Hospital No. 28	G. Wile Robinson, M.D., Kansas City
The Aviators, Illustrated	F. C. Simon, M.D., St. Louis

**GENERAL MEETING**

TUESDAY, MAY 27, 1919—9 A. M.

BALL ROOM, ELMS HOTEL

Address of the President	M. P. Overholser, M.D., Harrisonville
The Management of Streptococcic Empyema	H. P. Kuhn, M.D., Kansas City
Discussion opened by Dr. M. G. Seelig, St. Louis	
The Mechanics of Fluid in the Pleural Cavity	Logan Clendening, M.D., Kansas City
Discussion opened by Dr. Hudson Talbot, St. Louis	
Choice of Operation for Inguinal Hernia	R. E. Schlueter, M.D., St. Louis
Discussion opened by Dr. W. T. Reynolds, Kansas City	

Ureteral Calculi.....	C. E. Burford, M.D., St. Louis
Discussion opened by Dr. E. G. Mark, Kansas City	
Neuro-Retinitis (Choked Disc) Sequel to Thyroid Extirpation—Report of a Case	J. W. Sherer, M.D., Kansas City
Discussion opened by Dr. F. E. Woodruff, St. Louis	
Care of the Eye, Ear, Nose and Throat in General Practice....	James P. McCann, M.D., Warrensburg
Discussion opened by Dr. N. P. Wood, Independence	
Plea for the Early Recognition of Stomach Malignancy.....	E. H. Kessler, M.D., St. Louis
Discussion opened by Dr. O. H. McCandless, Kansas City	
Roentgen-Ray Treatment of Osteosarcoma	E. B. Knerr, M.D., Kansas City
Roentgen-Ray Therapy....	F. B. Hall, M.D., St. Louis
Discussion opened by Dr. R. L. Sutton, Kansas City	

**GENERAL MEETING**

TUESDAY, MAY 27, 1919—1 P. M.

BALL ROOM, ELMS HOTEL

Cardiovascular Diseases in the Army	J. C. Lyter, M.D., St. Louis
The Epidemic of Influenza in France	Llewellyn Sale, M.D., St. Louis
Care of Face and Jaw Injuries in the Army	Vilray P. Blair, M.D., St. Louis
Discussion opened by Dr. F. J. Tainter, St. Charles	
Preventive Medicine in War	Mazyck P. Ravenel, M.D., Columbia
Medical Problems in Future	J. C. Morfit, M.D., St. Louis
Discussion opened by Dr. J. F. Binnie, Kansas City	
Ear, Nose and Throat Service in Base Hospitals	Sanley S. Burns, M.D., St. Louis
Why Prenatal Care?..	C. A. Ritter, M.D., Kansas City
Discussion opened by Dr. D. R. Parman, St. Louis	
The Interruption of Pregnancy at Term	W. H. Vogt, M.D., St. Louis
Discussion opened by Dr. F. T. Van Eman, Kansas City	
A Contribution to the Study of Fibroid Tumors with a Suggestion for Their Control	H. E. Pearse, M.D., Kansas City
Discussion opened by Dr. Q. U. Newell, St. Louis	
The Hour-Glass Uterus	F. E. Wilhelm, M.D., Kansas City

**GENERAL MEETING**

WEDNESDAY, MAY 28, 1919—9 A. M.

BALL ROOM, ELMS HOTEL

Lues of the Cardiovascular Apparatus	Elsworth Smith, M.D., St. Louis
Observations on the Treatment of Syphilis	W. K. Trimble, M.D., Kansas City
Conditions Other Than Lues Giving Positive Wassermann Reaction.....	M. O. Biggs, M.D., Fulton
Discussion opened by Dr. W. W. Graves, St. Louis	



## Extracardiovascular Causes for Angina Pectoris

P. T. Bohan, M.D., Kansas City

Discussion opened by Dr. W. P. Elmer, St. Louis

## The Work of the Neuropsychiatrist in the Army Camps.....

Herman S. Major, M.D., Fulton

Discussion opened by Dr. M. A. Bliss, St. Louis

## Syphilis in the Etiology of Epilepsy

D. S. Booth, M.D., St. Louis

Discussion opened by Dr. W. F. Kuhn, Kansas City

## Observations Concerning the Feeble-minded and Epileptic.....

J. E. Harris, M.D., Marshall

## Hysteria: Diagnosis, Prognosis and Treatment

T. F. Lockwood, M.D., Butler

Discussion opened by Dr. F. M. Barnes, Jr., M.D., St. Louis

## Congenital Pyloric Stenosis

Roland Hill, M.D., St. Louis

## Congenital Pyloric Stenosis, Pylorospasm and Chronic Appendicitis.....

Caryl Potter, M.D., St. Joseph

Discussion opened by Dr. W. W. Duke, Kansas City

## Care of the Eye, Ear, Nose and Throat in General Practice....

James P. McCann, M.D., Warrensburg

Discussion opened by Dr. N. P. Wood, Independence

## GENERAL MEETING

WEDNESDAY, MAY 28, 1919—1 P. M.

BALL ROOM, ELMS HOTEL

## The Interpretation of Some Anatomical Curiosities in Man.....

A. G. Pohlman, M.D., St. Louis

## Nerve Suture with Special Reference to Injuries of the Musculospiral Nerve

Francis Reder, M.D., St. Louis

## Physiopathology of Intestinal Obstruction

Eugene P. Hamilton, M.D., Kansas City

## Conservative Surgery of the Pelvic Organs

Bert A. Poorman, M.D., Kansas City

Discussion opened by Dr. W. T. Coughlin, St. Louis

## Pseudo-Appendicitis.....

J. J. Link, M.D., St. Louis

Discussion opened by Dr. Daniel Morton, St. Joseph

## Treatment of Hemorrhoids

Carroll Smith, M.D., St. Louis

## Toxemia.....

O. B. Hall, M.D., Warrensburg

Discussion opened by Dr. L. J. Schofield, Warrensburg

## Public Safety.....

R. S. Vitt, M.D., St. Louis

## Emergency Surgery

M. W. Spickard, M.D., Kansas City

Discussion opened by Dr. H. DeLamater, St. Joseph

## Oak Pollen Anaphylaxis: Report of a Case

H. L. Kerr, M.D., Crane

## ST. LOUIS MEDICAL SOCIETY

Meeting of March 15, 1919

The meeting was called to order at 8:45 p. m. by the president, Dr. William Engelbach.

The minutes of the previous meeting were read and approved.

The scientific program consisted of the following:

"Pneumonia," by Dr. Eugene L. Opie.

Discussion by Drs. J. Henry Amerland, George Ives, Amand Ravold, Meyer J. Lippe and William Engelbach; Dr. Opie closing.

"A Brief Report of a Series of Unusually Interesting Cases," by Dr. John Young Brown.

Discussion by Drs. Cleveland H. Shutt, Eugene L. Opie and William Engelbach; Dr. Brown closing.

The Health and Public Instruction Committee reported on the bills that are now before the legislature. The report was adopted.

Attendance 71.

ALBERT F. KOETTER, M.D., Secretary.

## Meeting of March 22, 1919

The meeting was called to order at 8:45 p. m. by the president, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following:

"Shock," with lantern slide demonstration, by Dr. Joseph Erlanger.

Discussion by Drs. Major G. Seelig, Ellis Fischel, Robert M. Funkhouser, Ernest Sachs, Horace W. Soper and Llewellyn Sale; Dr. Erlanger closing.

"Some Uses of the Thermaphore," by Dr. W. E. Shahan.

Discussion by Dr. John Green, Jr.; Dr. Shahan closing.

The secretary read a letter from the Retail Druggists Association asking for the society's opinion on the Harrison law.

Dr. Koetter moved that this letter be referred to the Committee on Health and Public Instruction. Seconded.

Attendance 75.

ARTHUR GUNDLACH, M.D., Asst. Secretary.

## Meeting of March 29, 1919

The meeting was called to order at 8:35 p. m., by the president, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following:

## THERAPEUTIC MEETING

"Small Doses of Atropine," by Dr. Frank Fry.

"Small Doses of Veronal," by Dr. Horace W. Soper.

"Small Doses of Thyroid," by Dr. Martin F. Engman.

"Overlapping Stitch for Use in Operation on Ventral and Umbilical Hernia," by Dr. Harvey G. Mudd.

"Apparatus for Wound Protection," by Dr. Hudson Talbott.

"Venesection," by Dr. Louis H. Hempelmann.

"A Unique Surgical Procedure," by Dr. Harvey S. McKay.

"A Curette or Bur for the Lacrimal Sac and Duct," by Dr. John Green, Jr.

"The Use of Calomel in Typhoid Fever," by Dr. Charles H. Neilson.

"Post Operative Aid to Lung Expansion After Empyema," by Dr. Major G. Seelig.

"Use of Calomel in Small Doses," by Dr. William W. Graves.

"The Quartz Lamp in Dermatology," by Dr. Joseph Grindon.

"Incomplete Defecation," by Dr. David L. Penney.

Discussion by Drs. Carroll Smith, Robert M. Funkhouser, William H. Stauffer, Joseph Grindon and Francis L. Reder.

Dr. Aufderheide reported orally for the committee on Control and Prevention of Crime in St. Louis stating that the committee had been organized and that Dr. Fuchs had been elected one of the vice presidents and that he had been put on the executive committee.

The amendments to the by-laws in regard to changing the meeting night were discussed by Drs. Joseph Grindon, Frank A. Glasgow, Henrietta A. S. Borck and Albert H. Hamel.

Attendance 152.

ALBERT F. KOETTER, M.D., Secretary.

# PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Fifty-Sixth Meeting, Feb. 10, 1919

## 1. EXHIBITION OF CASES.—A. PRESENTATION OF CASE OF SCLERODERMA.—By DR. A. B. DAY.

N. C., aged 29, Jewish, married; this patient is presented as a case of scleroderma. The history of the present illness dates back four and one half years, to July, 1914. Pigmentation was first noted, leading to a gradual thickening of the skin of the face, hands, feet, later of the chest and abdomen. In 1916, raised nodules appeared over the chest and abdomen, and are numerous and prominent now. The patient also shows dry gangrene involving the terminal phalanx of one finger, and has lost one finger and one toe from a similar process. The other fingers show ankylosis with a tense, shiny, thickened skin.

Histologic examination of the skin nodules shows them to be made up of fibrous tissue. The case therefore shows a typical picture of scleroderma with multiple fibromata over chest and abdomen, and gangrene of fingers and toes, suggesting Raynaud's disease.

### DISCUSSION

DR. DOCK: This is an interesting case of scleroderma. The patient's history gives a clear account of early vascular spasms which illustrates the type associated with Raynaud's symptoms, a thing mentioned in descriptions of scleroderma. The fingers illustrate the differential diagnosis between leprosy, syringomyelia and Morvan's disease. The difference is particularly clearly shown in these types. On the arms is an extensive scleroderma. The patient's legs and arms show thickening extending below the subcutaneous tissue into the muscle. That is not present in lepers. The condition in the fingers, partial amputation, is characteristic but in the leper there is usually more rapid destruction. Morvan's disease, discovered in Brittany, is probably chiefly leprosy and represents the remains of the old endemic leprosy, although some of the cases, so-called, may be syringomyelia. This may have similar deformity but our patient does not show a dissociation of sensation. Those who have not seen scleroderma skin changes ought to take advantage of this patient and examine him more closely. The condition of the abdomen is interesting in its way but is clearly not circumscribed scleroderma, as a hasty examination might suggest.

## 2. PNEUMONIA FOLLOWING INFLUENZA.—By DR. EUGENE L. OPIE.

A commission consisting of Major A. W. Freeman, Capt. F. G. Blake, Lieut. James C. Small, Lieut. Thomas M. Rivers and myself were detailed by the Surgeon-General to study pneumonia in the army camps.

At Camp Pike we had the opportunity of studying pneumonia following the epidemic of influenza which began September 1 and reached a maximum between September 27 and October 2. Of 52,000 men in the camp 12,000 suffered with influenza; 1,499 developed pneumonia, and 466 died. Influenza was more frequent among newly drafted men than among men in the service more than one month and the incidence of pneumonia among newly drafted men was even higher than that of influenza.

We were able to demonstrate *Bacillus influenzae* in the nose, throat or sputum of every case of influenza examined within from three to five days after onset of the disease. Inoculation of mice with sputum

proved to be the most effective method of demonstrating the micro-organism. With the purulent bronchitis which accompanies approximately one-third of all cases of influenza *B. influenzae* was almost invariably found. Lobar pneumonia following influenza was somewhat less common than bronchopneumonia. Lobar pneumonia was caused in somewhat more than one-half of all cases by pneumococcus Type IV. Two-thirds of the cases of bronchopneumonia were caused by the same micro-organism. Pneumococci Types I and II which have caused most cases of lobar pneumonia in civil life were infrequently encountered in association with the pneumonia following influenza.

Purulent bronchitis was very frequently seen at necropsy. Peribronchial hemorrhage and bronchiectasis gave further evidence of injury to the bronchi. Suppurative pneumonia was found in about one-fourth of the necropsies on those who had died with pneumonia. Localized abscesses usually situated immediately below the pleura were not uncommon. Suppuration of interstitial tissue of the lung superimposed on bronchopneumonia or less frequently on lobar pneumonia occurred in a considerable porportion of the cases. Both of these lesions were accompanied by empyema. Hemolytic streptococci were almost invariably found in association with the suppurative lesions. In several instances staphylococci were isolated.

We were able to demonstrate that infection with hemolytic streptococci may spread as an epidemic through the pneumonia wards of a hospital. Superimposed infection with hemolytic streptococcus increased the mortality of pneumonia from 50 per cent. to 100 per cent. This streptococcus pneumonia is a preventable disease and may be checked by the introduction of measures which prevent the transmission of streptococci either by coughing or by direct or indirect contact from one patient to another. Overcrowding and the failure to recognize the infection favors transmission of streptococcus pneumonia.

In a number of instances patients who had suffered with pneumonia due to pneumococci were reinfectd during convalescence with a type of pneumococcus different from that which caused the first infection. Conditions which facilitate the transmission of streptococci favor the occurrence of reinfection with pneumococci.

### DISCUSSION

DR. DOCK: I think this presentation of Dr. Opie's is one of the most valuable that has come out of the camps. One that is most interesting to me is his experience with influenza bacillus. Influenza bacilli are seen by those who look most seriously for them, but we can not say that people who have not found them have not made a careful search. Even if we admit that they who look with the greatest skill always find them we still have a lot to learn about influenza bacilli, and we hope Dr. Opie can find something to tell us some other time.

DR. ROBINSON: The points that Dr. Opie brings out on ward infections are very important. The belief that people go to hospitals because they are safer there is one we hope is correct. On the other hand, if we have in a ward a large number of people, each one having his own type of organism, there is certainly a danger that must be borne in mind of crossed infections. At one time I saw a large number of typhoid fever patients in wards and saw quite a number of them with pneumonia, apparently contracted in the hospital. We had, I remember, a succession of typhoid fever deaths. The necropsies showed pneumonia in many of them, apparently contracted in the hospital wards. I feel that it is a very important matter, and that it should always be kept in mind, even when dealing with cases that are



not contagious in the commonly accepted use of that word.

DR. OPIE: If appropriate methods are used the influenza bacillus can be invariably found in cases of influenza. The bacillus is found in the respiratory passages of some normal individuals as well. The facts known concerning this micro-organism are in harmony with the view that it is the cause of the disease but final proof of the etiological relationship of *Bacillus influenzae* to influenza is still incomplete.

### 3. SUBDELTOID BURSITIS AND PAINFUL SHOULDER.—By DR. ARCHER O'REILLY AND DR. F. H. EWERHARDT.

Subdeltoid or subacromial bursitis is one of the most common causes of painful shoulder. It is the result of some injury to the shoulder which forces the tuberosity against the acromion, thus traumatizing the bursa or the tendon of the supraspinatus muscle, which results in an inflammatory reaction. It may also be due to an infectious process. At times there is a partial rupture of the tendon of the supraspinatus. In certain cases the roentgen ray shows a deposit in or about the bursa; at operation this is found as a calcareous or gelatinous mass, more frequently in the tendon beneath the bursa.

As a result of the inflammation there is limitation of motion, either partial or complete. When partial it is confined chiefly to abduction and rotation. Even in complete limitation there is 10 degrees of free motion, before the bursa begins to slide on itself.

Pain may be severe. It may be localized at the point of the shoulder over the bursa, or it may be referred to the attachment of the deltoid or down the arm or into the neck. When motion is present the pain may appear only as the tuberosity passes under the acromion.

In the acute cases rest is indicated with baking and gentle massage, followed, as the acute symptoms disappear, by gradual motion. In the chronic cases, with adhesions, an anesthetic and forcible manipulation may be necessary. In cases with deposit an operation may be advisable to remove the deposit. The authors have not seen any cases in which this procedure was required.

Other types which simulate sub-acromial bursitis are arthritis of the acromioclavicular joint and a crushing of the joint cartilage, described by Sir Robert Jones.

The roentgen ray is negative in the simple types of subacromial bursitis. In the others it shows a deposit about the acromioclavicular joint, or one in or about the bursa.

The prognosis is favorable. The condition if untreated usually recovers in from one to three years.

In fifty cases studied there were slightly more females than males. It was most common between the ages of 40 and 60, and seemed to more frequently involve the shoulder most used.

#### METHOD OF TREATMENT

1. *Heating*.—Shoulder is heated by means of radiant light, which we find is more beneficial than convective heat, because of its power of penetration.

2. *Massage*.—(a) Removing spasm by means of gentle stroking movements; (b) relieving venous and lymph stasis by deep stroking motions; (c) stimulating arterial supply by kneading and percussion; (d) breaking up adhesions by deep percussion movements.

3. *Position of Patient*.—Patient must be in a thoroughly relaxed position. Patient must know what movement to expect, must have confidence of operator. Sudden or too forceable movements increase spasm.

4. *Movements*.—Resistive movements to relieve spasm by throwing out of action antagonistic groups. Passive movements contraindicated.

5. *Manipulation*.—Forceable manipulation of the joint in all directions, scapula being held in fixed position.

6. *Active Exercise*.—Various kinds having as the main object raising abduction and circumduction. Example: Indian clubs, dumb bells, chest weights, wands.

7. *Dosage*.—Amount of work should be increased from day to day. If patient complains of increased pain on day following treatment indications are that treatment was too severe.

8. *Duration*.—From five to ten weeks if treatment is given daily.

#### DISCUSSION

DR. EWING: A case has recently come under my observation in private practice, which may have something in common with this subject. A lady, 40 years of age, whose eyes had previously been normal, on November 4 complained of the vision being blurred in the left eye. In this eye the vision was 20/38, there was a small central scotoma and a large scotoma in the lower portion of the field: the examination with the ophthalmoscope was negative. The following day the vision was 20/60, the central scotoma was somewhat increased in size, but the large scotoma in the lower portion of the field had disappeared. The ophthalmoscope showed a grayish infiltration of the retina, which began at the lower temporal margin of the disc and extended outward and upward in the shape of a hunter's horn, the base of the horn being at the disc and the mouthpiece at the nasal margin of the macular region. The elevation of the swelling was measured by about one diopter.

At this examination the patient also complained of pain in the left shoulder, which had existed for several days and was attributed to the driving of an automobile. Because of this pain in the shoulder a general examination was made by Dr. Albert Taussig, who reported "nothing abnormal except that curious pain about the left shoulder that suggests an arthritis rather than a neuritis. There is also some evidence of an irritation about the appendix: not enough, however, at present to justify the diagnosis of appendicitis. The urine, blood pressure, arteries and digestive tract are normal. Nothing in my findings appears to throw light on the cause of the optic neuritis."

Two weeks previous to the examination of the eye, November 4, Dr. Sluder had operated on the nasal sinuses of the left side. These, however, were quiet and draining freely.

On the third day the retinal swelling which seemed to be a lymph infiltration, began to decrease. From this time on it gradually faded away and by December 7 it had disappeared. In the meantime, however, the patient suffered so severely with the pain in the shoulder that she was confined to the house for about a week, but the disappearance of this pain and the healing of the shoulder were accompanied by the healing of the retina.

There is a possibility that the retinal disturbance originated from the nasal complication, but its disappearance with the cessation of the inflammation in the shoulder strongly points to its having been connected with the latter.

DR. SACHS: I would like to ask Dr. O'Reilly whether it is not the generally accepted view that those forms of subdeltoid bursitis that have no deposits have negative roentgen-ray findings? Has there been any recent work according to which joint changes occur in this condition?

DR. O'REILLY, closing: The ordinary bursitis does not show any change in the joint and of course there is no use in showing roentgen rays of the shoulder joint. It is possible that the pictures I have shown did not make it very clear; they were not cases of bursitis but were infections, apparently of the acromioclavicular joint which is similar to bursitis. Apparently most of them cleared up under treatment. In ordinary bursitis there is no change shown unless there is a deposit in the tendon.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held in the Commerce Club Rooms, Wednesday evening, April 2, 1919, the president, Dr. A. B. McGlothlan, in the chair. Sixteen members were present. The minutes of the previous meeting were read and approved.

The following committee was appointed by the president to work out the details of the hospital clinic resolution adopted at the previous meeting: Drs. Stevenson, Potter, Carle, Wallace, L. R. Forgrave.

The amended by-laws as reported by the committee appointed for that purpose, a copy of which having been previously sent to each member, were read and adopted with the addition that the committee on economics and their duties be included. The same committee was authorized to have 500 copies printed.

A vote of thanks was extended to Mr. William Morton, attorney, for his assistance to the committee.

The following motion by Dr. Potter, seconded by Dr. Hansen, was adopted:

*Resolved*, That any member of the Buchanan County Medical Society who operates in the Osteopathic Hospital or the Savannah Sanatorium or consults with osteopaths or any unethical cult and is convicted after charges have been preferred, be dropped from the roll of membership.

W. F. GOETZE, M.D., Secretary.

#### JACKSON COUNTY MEDICAL SOCIETY

##### Meeting of March 18

The Jackson County Medical Society held the seventh meeting of the year, Tuesday, March 18, 1919. The meeting was called to order by the president, Dr. F. T. Van Eman. Owing to the absence of the secretary, Dr. Hugh Miller, Dr. Castelaw was called to the chair and the reading of the minutes of the previous meeting was suspended.

Dr. J. F. Binnie gave an interesting and instructive talk on his "Experiences with the American Expeditionary Forces," illustrated by maps and lantern slides.

This was followed by a case report by Dr. Robert McE. Schaffler of a fracture dislocation of the spine, illustrated by roentgen-ray plates.

The secretary read a communication from Mrs. Josephine C. McLaughlin regarding the work of St. Luke's Hospital Child Welfare Club on the registration of births in Jackson County and the certificates of registration issued by them. The cooperation of the members of Jackson County Medical Society was urged in perfecting the records sent to the vital statistics bureau of the health department of Kansas City and the enforcement of the birth registration law.

The motion was adopted that the communication be acknowledged and that the society support all efforts in enforcing the law of registration of births.

Attendance 100.

R. E. CASTELAW, M.D., Secretary pro tem.

#### Meeting of March 25

The Jackson County Medical Society held the eighth meeting of the year, Tuesday, March 25, 1919. The meeting was called to order by the president, Dr. F. T. Van Eman, and the minutes of the previous meeting were read and approved.

The scientific program consisted of:

"Some of the Whys and Wherefores of Venereal Diseases," by Dr. Franklin R. Wright, Professor Genito-Urinary Surgery, University of Minnesota, Minneapolis.

Discussion by Drs. F. M. McCallum, G. Wilse Robinson, Major E. G. Mark.

Owing to the lateness of the hour the address on "War Neuroses," by Dr. G. Wilse Robinson, was postponed.

Attendance 51.

#### Council Proceedings

The Council held the sixth meeting of the year in the office of Dr. William Frick, 1010 Rialto Building, March 25, 1919, at 7 p. m. Present: Drs. Van Eman, Miller, Trask, Schaffler, Frick and Coleman. Minutes of the previous meeting were read and approved.

The following new members were elected: L. V. Dawson, 703 Lathrop Building; H. S. Marsh, 816 Lathrop Building; L. H. Wallendorf, 2209 E. Thirty-Seventh Street.

The motion was carried to purchase a desk for the use of the secretary.

The treasurer was instructed to pay the salary of the assistant secretary from the *Weekly Bulletin* fund and to draw from the general fund for any deficit.

The question of a membership for Jackson County Medical Society in the Round Table of Clubs of this city was discussed and deferred for further consideration.

HUGH MILLER, M.D., Secretary.

#### ST. LOUIS COUNTY MEDICAL SOCIETY

The society was called to order at 3:30 p. m. by the president, Dr. Horine Miles. The minutes of the previous meeting were read and approved. Those present were: Drs. J. H. Armstrong, Miles, Sutter, Eggers, Westrup, Conway, Corley, Baker.

A number of clinical reports published by the Massachusetts General Hospital were read by the secretary and discussed. The members were unanimous in their opinion that this was one of the most instructive and entertaining meetings ever held, these reports bringing out many very important points and recalling to those present many cases along similar lines. As the society has subscribed for these reports, which are published weekly, it is hoped that there will never be a meeting in future without an instructive program.

After the above discussion the question was raised as to whether a larger attendance at the meetings of the society would not be induced if the meetings were held at night instead of in the afternoon. A motion was made to change the time of meeting to 8:30 p. m., and hold the meetings at the residences of members, who will be expected to furnish light refreshments, the members being called on in alphabetical order. After an understanding that this change will be only tentative until the plan can be fairly tested, the motion carried.

A. CONWAY, M.D., Secretary.



### WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society held its regular meeting in Marshfield on March 19, 1919, with the following members present: Drs. Sayers, Atkins, Bailey and Highfill; visitor, Dr. J. P. Werner. The minutes of the last meeting were read and approved and the regular business was then taken up and disposed of.

On motion of Dr. Atkins, it was voted to appoint a committee to draw up resolutions on the death of members of this society or members of their families.

Election of officers for ensuing year resulted as follows: J. S. Sayers, Rogersville, president; William A. Atkins, Rogersville, vice president; J. R. Bruce, Marshfield, secretary-treasurer; M. Highfill, Marshfield, delegate; W. J. Rabenau, Fordland, alternate to state association meeting.

Dr. J. P. Werner of Marshfield was elected to membership in the society.

It was voted to hold our next meeting at Rogersville and that it be a public meeting.

M. HIGHFILL, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of *New and Nonofficial Remedies*, 1919, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**TANNIN ALBUMINATE EXSICCATED-MERCK.**—A compound of tannic acid and albumin thoroughly exsiccated and containing about 50 per cent. tannic acid in combination. It was first introduced as tannalbin. The use of tannin albuminate is based on the assumption that the tannin would pass the stomach largely unchanged, and thus the astringent action be exercised in the intestine where the compound would be decomposed by the intestinal fluid. It is used in diarrhea, particularly that of children and in phthisis. Merck and Co., New York.

**TANNIN ALBUMINATE EXSICCATED-MERCK TABLETS, 5 GRAINS.**—Each tablet contains 5 grains tannin albuminate exsiccated, Merck. Merck and Company, New York (*Jour. A. M. A.*, March 1, 1919, p. 653).

**NEOARSAMINOL.**—A brand of neoarsphenamine complying with the N. N. R. standards (see *New and Nonofficial Remedies*, 1919, p. 41). Neoarsaminol is supplied in tubes containing respectively, 0.15 gm., 0.3 gm., 0.45 gm., 0.6 gm., 0.75 gm. and 0.9 gm. Neoarsaminol is manufactured under the "neosalvarsan patent" by license of the U. S. Federal Trade Commission by the Takamine Laboratory, Inc., New York.

**SWAN'S MIXED ACNE BACTERIN (No. 41).**—Marketed in 6 c.c. vials, each cubic centimeter containing 25 million killed acne bacilli and 500 million killed *Staphylococcus pyogenes-albus*. For a discussion of "Acne" vaccine, see *New and Nonofficial Remedies*, 1919, p. 296. Swan-Myers Company, Indianapolis, Ind.

**SWAN'S PERTUSSIS BACTERIN (No. 38) (PROPHYLACTIC).**—Marketed in packages of three 1 c.c. vials, containing, respectively, 50, 100 and 200 million killed pertussis bacilli. For a discussion on Pertussis Bacillus Vaccine, see *New and Nonofficial Remedies*, 1919, p. 287.

**SWAN'S MIXED FURUNCULOSIS BACTERIN (No. 39).**—Marketed in 6 c.c. vials, each cubic centimeter containing 500 million killed *Staphylococcus pyogenes-aureus* and 500 million killed *Staphylococcus pyogenes-albus*. For a discussion of *Staphylococcus* Vaccines, see *New and Nonofficial Remedies*, 1919, p. 289.

**SWAN'S TYPHOID-PARATYPHOID BACTERIN (No. 42) (PROPHYLACTIC).**—Marketed in packages of three 1 c.c. vials, one vial containing 500 million killed typhoid bacilli and 250 million each of paratyphoid bacilli A and B, while the other two vials each contain one billion killed typhoid bacilli and 500 million each of paratyphoid bacilli A and B. For a discussion on Typhoid Vaccine, see *New and Nonofficial Remedies*, 1919, p. 292 (*Jour. A. M. A.*, March 22, 1919, p. 863).

### PROPAGANDA FOR REFORM

**MALT PREPARATIONS IN INFANT FEEDING.**—Malt preparations have enjoyed popularity for some time in the feeding of infants. A familiar mixture is the so-called malt soup, the use of which was modified by Keller to include potassium carbonate. The assimilability of maltose has been highly lauded, but the advantage over other carbohydrates has not been definitely proved. Maltose has been vaguely stated to be indicated in the constipation of infants and the retention of calcium facilitated by the use of Keller's formula. However, in experiments on animals it was not found that administration of a base like sodium carbonate produced any effect on the balance of calcium. It has also been reported that in a normal infant the addition of alkali to milk produced an unfavorable effect on calcium retention. Without addition of alkali, malt extract was found to act beneficially on calcium storage, but this is probably not due to the maltose. If malt soup has a favorable effect on calcium metabolism, it is not due to the alkali originally present or added to it. There is no reason at present to attribute the seemingly substantiated benefit from malt preparations on calcium storage to the maltose (*Jour. A. M. A.*, March 1, 1919, p. 656).

**PHARMACEUTICAL MANUFACTURERS AND "PRIVATE FORMULA" PRODUCTS.**—Sharp and Dohme explain that it is their inflexible rule that all "private formula" orders intended for public distribution are refused until the copy for the "literature" has been studied by their experts. They explain that an order for three preparations which were later the subject of prosecution for misbranding under the federal Food and Drugs Act were filled and shipped in the belief that the copy had been passed on by their Spanish expert, when in reality this had not been done. The house of Sharp and Dohme feels that it has been done an injustice in the publication of the "misbranded nostrum" notices which gave no hint that the preparations were private formula products, and were not sold under the name of Sharp and Dohme. The firm believes that an injustice was done in that the references to these misbranded nostrums will lead readers to believe that they were sold under the label of Sharp and Dohme. There is unfortunately a commercial distinction between products which are made by a firm and products which are sold by it. Whether or not there is any moral difference between profiting by the manufacture of a "patent medicine" that is to be retailed by some one else, and selling the same medicine under one's own name, is a question (*Jour. A. M. A.*, March 1, 1919, p. 669).

**MISBRANDED NOSTRUMS.**—The following nostrums were declared misbranded under the federal Food and Drugs Act because of the false, fraudulent or

misleading claims made for them: Alkavis; Sulfero-Sol; Gonorrhea and Gleet 3 Day Cure; Old Indian Fever Tonic; Pain-I-Cure; Walker's Dead Shot Colic Cure (*Jour. A. M. A.*, March 1, 1919, p. 670).

**SACCHARIN—AFTER THE WAR.**—Having satisfied a need during the sugar shortage, the manufacturers of saccharin appear not to be content to turn their talents and plants to better uses, but suggest that the great commercial sacrifices made in setting their works into operation to produce saccharin should be rewarded by permission to continue the traffic under postwar conditions. The referee board to which the saccharin question was referred in this country has by no means given a clean bill of health to the chemical, and the people need to be protected from the danger, or at least the deception, of a substitute for sugar which is in no sense a true food (*Jour. A. M. A.*, March 8, 1919, p. 729).

**ORGANO TABLETS AND ORCHIS EXTRACT.**—The Organo Product Co., Chicago, sells Organo Tablets as a cure for "lost vitality." The Packers Product Co. sold Orchis Extract until it was put out of business by the government in 1918 by the issuance of a fraud order. Even a superficial comparison of the circular letters and booklets used in exploiting Organo Tablets shows a close connection between this humbug and the government declared fraud—Orchis Extract. Has Orchis Extract of the Packers Product Co. become Organo Tablets of the Organo Product Co. (*Jour. A. M. A.*, March 8, 1919, p. 746)?

**DEPILAGIENE.**—The A. M. A. Chemical Laboratory reports that "Franco-American Hygienic Depilagene," a hair remover, essentially is a mixture of barium sulphate, barium sulphid, sulphur and starch. The amount of barium sulphid was found to be 22.6 per cent.: this is equivalent to about 45 per cent. of commercial barium sulphid. Depilagene has no claim to originality, as practically all chemical hair removers are composed of some form of sulphid. Naturally, the preparation is likely to cause more or less irritation of the skin (*Jour. A. M. A.*, March 8, 1919, p. 746).

**VALIDITY OF PROVISIONS CONCERNING "PATENT" MEDICINES.**—In the proceedings instituted by E. Fougere and Co., Inc., against the city of New York, et al., the Court of Appeals of New York holds that the provision of the sanitary code is not unconstitutional in that it prescribed the formula disclosure of medicines. The purposes and effects of the code were well within the police power and had the object of protecting the public. "No man has a constitutional right to keep secret the composition of substances which he sells to the public as articles of food" (*State v. Aslesen*, 50 Minn. 5, 52 N. W. 220). If that is true of food, it is even more plainly true of drugs. But there was one objection to the ordinance, though one that amendment might correct: that the ordinance did not except existing stores of merchandise in the hands of dealers, in that the board of health exceeded the powers delegated to it (*Jour. A. M. A.*, March 8, 1919, p. 753).

**THE VICTORY OVER RABIES.**—Amid the victories on the European battlefield, we may pause to contemplate man's conquest of rabies. During the year 1916, 1,008 persons in the district of Lyons received the antirabic treatment. A single death in this list places the mortality at 0.099 per cent. Since 1900, more than 9,000 persons have received antirabic inoculations, with a total of nine deaths, or 0.09 per cent. (*Jour. A. M. A.*, March 15, 1919, p. 800).

**NATURE'S REMEDY TABLETS.**—A. H. Clark, of the A. M. A. Chemical Laboratory, reports that "Nature's Remedy" is claimed to contain ten ingredients; that

the manufacturers declare seven of these—burdock, juniper, sarsaparilla, mandrake, rhubarb, dandelion and prickly ash; and that the manufacturers state they are "more proud" of the other three, but refrain from naming them for fear of imitators. Clark's analysis, supplemented by a microscopic examination by E. N. Gathercoal at the University of Illinois School of Pharmacy, indicated that the unnamed drugs are aloes (or a preparation of aloes), cascara bark and belladonna root. The microscopist stated that rhubarb, as well as all the other named drugs, if present at all are there in such small quantities that no evidence of their presence was seen. As a result of the examination and a consideration of their powerful cathartic action, it is believed that Nature's Remedy is, essentially, aloes or aloin, cascara, and belladonna with, probably, resin of podophyllin (instead of mandrake)—a common cathartic mixture (*Jour. A. M. A.*, March 15, 1919, p. 815).

**MISBRANDED NOSTRUMS.**—A "Notice of Judgment" has been issued declaring the following nostrums misbranded: Chase's "Blood and Nerve Tablets," "Liver Tablets," and "Kidney Tablets"; XXX Tonic Pills; Egiuterro; Uicure; Sweet Rest for Children; Beaver Drops Comp.; Blood Kleen; Heart and Nerve Regulator; Kidneyline; Eye Powder; Tanrue Herbs and Pills, and 5 Herbs (*Jour. A. M. A.*, March 22, 1919, p. 883).

**HAVENS' WONDERFUL DISCOVERY.**—The Council on Pharmacy and Chemistry reports that E. C. Havens, Sioux Falls, S. D., requested consideration of a remedy which he claims to have discovered for the cure of influenza. According to the label on a specimen, "This remedy is good for Coughs, Colds, Lung Diseases, LeGrippe, Influenza, Rheumatism; good for Pains, Cramps, Backache, Lumbago, Neuralgia; for severe pains soak your feet in hot water for three nights, add three tablespoons of baking soda in water and apply Anti-Flue Medicine to the affected parts." The "discovery" was stated to contain oil of wintergreen, oil of sassafras, oil of black pepper, spirit of camphor, spirit of turpentine, spirit of chloroform, tincture of arnica and alcohol, and was called Havens' Rheumatic Remedy before its supposed effect on "flue" was "discovered." The Council finds that Havens' Wonderful Discovery is an unscientific, irrational mixture, marketed under therapeutic claims which are unwarranted and without foundation (*Jour. A. M. A.*, March 22, 1919, p. 883).

## BOOK REVIEWS

**THE HEARTS OF MAN.** By R. M. Wilson, M.B., late assistant to Sir James Mackenzie, under The Medical Research Committee. London: Henry Frowde, Hodder & Stoughton. Oxford University Press. Warwick Square, E. C. American Branch, 35 W. Thirty-Second Street, New York.

The reviewer once ordered a book entitled "The Human Mole," under the impression that it treated of those cases in which the fetus disappears and only the membranes remain. The book proved to be a new "yellow-back" of the most brilliant hue. The title of this book, "The Hearts of Man," suggests an attempt to attract the eye of the inexperienced through the eternal feminine. This first impression is all wrong. The book is, quite to the contrary, a serious attempt to examine certain cardiac phenomena, particularly as they relate to respiration and various vascular states, in a serious manner. Confidence is stimulated by the assertion that the author has been an assistant to Sir James Mackenzie and that this eminent authority has read the manuscript.



A perusal of the book tends to give one a broader view of the activities of the heart. The importance of the condition of the vessels it is true is generally recognized, but that the heart may be influenced by the other organs is perhaps not so fully evaluated. The book is well worth one evening's attention. Once started the interest and curiosity will compel its complete perusal, and the information gained will come purely as a painlessly assimilated by-product.

A. E. H.

**ROENTGENOTHERAPY.** By Albert Franklin Tyler, B.Sc., M.D., Professor of Clinical Roentgenology John A. Creighton Medical College, etc. With 111 illustrations. St. Louis: C. V. Mosby Company, 1918. Price, \$2.50.

The book is divided into six chapters. The interesting parts are the description of the necessary apparatus, the superficial therapy, deep therapy and the case histories.

In the introduction the author gives the terminology as adopted by the American Roentgen Ray Society.

Chapter 2 describes the power plant and all the necessary accessories for superficial and deep therapy and hints for the arrangements of a roentgen laboratory. The methods of estimating the dose to be given are well described.

Chapter 3 is devoted to superficial therapy. After giving the technic the author gets away from the usual mode of classifying the technic for each disease and groups the diseases in classes needing the same technic.

Chapter 4 treats of "deep therapy," and is a good exposition of deep therapy, but it should always be remembered that the personal equation in this mode of treatment cuts a large figure. The reviewer does not follow some of the rules here given, but we reach the desired result.

Chapter 5 is devoted to sarcoma, carcinoma and leukoplakia, while the final chapter gives case histories in which a large number of cases are cited with description of the appearance before and after the application of the roentgen rays. The number of cases treated and the successes of the author deserve that he be given a respectful hearing.

The work is a book of 160 pages, neatly printed, well bound, and the illustrations profuse for a work of this size.

**AN INTRODUCTION TO THE MAMMALIAN DENTITION.** By T. Wingate Todd, M.B., Ch.B., Manc.; F.R.C.S., Eng., Captain, Canadian Army Medical Corps. Henry Willson Payne, Professor of Anatomy in the Western Reserve University, Cleveland, Ohio; Formerly Lecturer in Anatomy Victoria University of Manchester, England. With 100 illustrations. St. Louis: C. V. Mosby, 1918. 290 pages. Price, \$3.

The importance of comparative anatomy and physiology has long been recognized, but for the most part the facts pertaining to the phylogeny of the teeth have been presented in a fragmentary or inaccessible form. Professor Todd's book is perhaps rather modest in its title as an introduction, because in so far as the subject matter is concerned, the mammalian dentition has been covered rather thoroughly. It is quite impossible in the limited space of this review to present any detailed summary or criticism. The book in general is a systematic study of mammalian dentition with some references to the tooth picture in the lower vertebrates, and is attractively presented with many well-executed half tones. While the arrangement of the book is rather unusual, the writer has furnished in so far as it is possible his personal interpretation gleaned from long study and wide experience.

The first three chapters are devoted to generalized information on the evolution and ancestry of the mammals and the relation of the dental form and

formula to life and habits. The teeth of the insectivores, the primates and man, both paleolithic and modern, are next considered, followed by a chapter on the anomalies in dentition, which is if anything too brief in comparison with the remainder of the text. Retrogression in evolution is noted in the chapter on the edentates and followed by a consideration of divergence in the carnivores. The herbivorous animals, rodents and ungulates receive attention, and are followed by the unusual mammals, elephants, sea-cows, hyrax, bats, whales and porpoises, and the monotremes. A well-written chapter is devoted to the deciduous dentition, particularly in the primates, and the roots of teeth in these forms is briefly but satisfactorily considered. The final chapter under the heading of Evolution of Types summarizes the general tooth scheme, and points out our inability to interpret the evidence at hand.

The book may be highly recommended and represents a type of applied, systematical work which is unfortunately adapted only to the select few. The Introduction to Mammalian Dentition may be regarded as a distinct contribution, and both writer and publisher are to be congratulated on the effort and expense involved in a volume of this character which necessarily will have only a limited sale.

A. G. P.

**SURGICAL TREATMENT. A Practical Treatise on the Therapy of Surgical Diseases for the Use of Practitioners and Students of Surgery.** By James Peter Warbasse, M.D., Formerly Attending Surgeon to the Methodist Episcopal Hospital, Brooklyn, N. Y. In three large octavo volumes and separate Desk Index Volume. Philadelphia and London: W. B. Saunders Company, 1919. Cloth. \$30 per set.

The second and third volume of this work maintain the high standard set by the first volume. The second volume takes up first the surgical affections of the head. That it is thoroughly up to date is manifest by the comprehensive discussion of such subjects as drainage in spontaneous cerebral hemorrhage and resection of the seventh nerve by suboccipital craniotomy. Following this is a discussion in turn of the diseases of the eyes, nose, mouth and ear. The sections on the spine and thorax are most apt to arrest the attention of the general surgeon. In these one finds operations best classified as "stunts" described such as esophagojejunostomy and interscapulothoracic amputation for carcinoma of the breast. The final section of this volume deals with disease of the abdomen. The inclusion of anastomosis by means of bone ring and Murphy button seem hardly in keeping with the advanced character of the remainder of the discussion.

The final volume treats of the remaining intra-abdominal organs, the genito-urinary organs, the extremities and miscellaneous subjects.

The work is particularly to be recommended to the young man who is ready for the wider vision in practical surgery. He will find in it a broad discussion of the main features in surgery. The presentation is clear and comprehensive and the advice given reliable. It presents the outlook in a hopeful spirit, so necessary to harmonize with the spirit of youth. It may be safely predicted that in a generation from now many a mature surgeon will point to it as the bridge over which he first crossed the troublous stream, as we now do to Treves, Tillmanns and Koenig, and he will do it with pride, for it is a product of one of his countrymen.

A comprehensive author and subject index volume of 120 pages accompanies the set. This compensates for the hideous "table of contents" on the back of each volume intended to enlighten the prospective reader as to the contents of the respective volumes. It would have added to the attractive appearance of the volumes had the excessive lettering of the backs been omitted.

A. E. H.

# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

Volume XVI

CHICAGO, ILL., AND ST. LOUIS, MO., JUNE, 1919

NUMBER 6

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3517 Pine St., St. Louis, Mo.

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### ORIGINAL ARTICLES

#### A PLEA FOR THE EARLY RECOGNITION OF STOMACH MALIGNANCIES \*

E. H. KESSLER, M.D.  
ST. LOUIS

The examination of the barium filled gastrointestinal tract by means of the roentgen ray has convinced me of the enormous and needless sacrifice of human life by reason of the length of time the patient has complained of gastric symptoms, until that patient is referred to the roentgenologist for examination. The interval of time when the patient first "noticed his stomach" until the roentgenologist makes his examination may be from weeks to a couple of years.

In 103 cases Farr found the symptoms had existed more than three months before the patient consulted the physician. Nine months more past before the patient entered the hospital.

During the past several years I have not seen an early case of cancer of the stomach. It might be said that the writer has not the ability to recognize early cancer. That might be true, but no case has been returned which was negative at the first examination.

Again, you might say the referring physicians were not acute observers. They were from all parts of the city as well as from the surrounding states. So we must infer that they were the average in diagnostic ability.

When I say early cancer of the stomach, I mean that time before the patient has a constant pain, a constant feeling of fullness, before there has been much loss of weight, before the patient really feels very sick, and above all before a palpable mass can be felt, even in the thin patient.

When symptoms of dyspepsia persist after a corrective diet, when there is anemia which

cannot be explained, the patient should be examined by a competent roentgenologist.

The proper time for examination is while the cancer is localized and when the clinical investigation alone is insufficient. It is the time when eradication is possible. This is the time when the history is of most importance. The history and the physical examination must bring the patient under observation. The laboratory and the roentgen ray must confirm or deny the diagnosis.

Basler says four modes or helps are at our disposal: The physical examination and the history, which brings the patient under observation; the roentgen ray, the laboratory, and the exploratory operation. If given the choice of only two of these he will take the history and the roentgen ray.

Moynihan says, "The crying need in cases of carcinoma is not the early diagnosis of carcinoma of the stomach only, but of all other parts of the alimentary tract."

The diagnosis of our old textbooks is a recital of the dead house findings, and involves a 100 per cent. mortality.

When I speak of an examination by a roentgenologist I at no time mean to neglect the laboratory or the physical findings. The roentgen rays do not replace clinical or laboratory work. The roentgenologist does not stand alone. He is one of a group of clinicians. The roentgenologist who would diagnose early tuberculosis without considering the clinical findings would be treading on dangerous ground. In cancer of the stomach the roentgen ray is one means—I might say *the* one means—of early detection.

How early can cancer of the stomach be detected? Carman answers this under three heads:

1. The character of the cancer, whether a frank tumor, or an insidious infiltration, or a cancerous ulcer.

2. Its situation.

3. The amount of roentgenologic evidence, together with the clinical corroboration.

\* Read at the Sixty-Second annual meeting of the Missouri State Medical Association, Excelsior Springs, May 27, 1919.



To these three headings I wish to add a fourth consideration: The ability of the examining roentgenologist. The roentgen ray is held in esteem, or looked on as of little importance, according to the ability of the examining roentgenologist.

Friedenwald says, "We must all realize the great importance of the early diagnosis of gastric cancer." The gravity of this statement can be fully realized when he says that out of 266 cases operated on not a single patient is living. He says the diagnosis of fully developed cancer is simple but in its incipient stage it is most difficult.

Smithies says that in 921 operatively and pathologically demonstrated cases, 10 per cent. of the series was demonstrated by the roentgen rays, where previously only a suspicion of malignancy had been entertained.

Baetjer and Friedenwald of Johns Hopkins says, "The roentgen ray has presented us with a method of diagnosis of cancer of the stomach more correct than other means, but its findings must be taken in conjunction with the clinical findings."

W. J. Mayo says, "Carman is demonstrating 95 per cent. of cancer by the time they give symptoms enough to call the patients' attention to the fact that something is wrong with the stomach."

Moynihan says, "The insidious development of cancer is the cause of failure of early detection."

To realize the truth of the above statement, think of the cancers of the breast coming to you when the glands are involved, or the uterine cancers first noticed by the foul discharges. These cancers can be seen and felt.

Cancers of the stomach, near the openings, may give fairly early symptoms. Near the esophageal opening, difficulty in swallowing and pain may be the first symptoms. Growths at the pyloric opening, will likely give warning by pain and symptoms of retention. When the cancer occupies the body of the stomach, local symptoms may be wanting until a large area is involved. However, there will have been a good history of recurring dyspepsia over months or years, and anemia with a late cachexia. At this time the tumor can likely be palpated. I say tumor; I might say cancer can be felt, for benign gastric neoplasms are rare. Graham says 95 per cent. of stomach tumors are cancers.

The ages most susceptible are from 40 to 70 years, with many exceptions.

Bassler says 71 per cent. of cancers are engrafted on the edge of an ulcer.

Raux thinks ulceration in the stomach and duodenum might follow appendicitis.

Mayo says there is no known cause save irritation with a disturbance of circulation and possibly a specific infectious substance.

Ochsner places irritation and acidity as the main causes of cancer in the stomach.

Gastric ulcer is considered a forerunner of gastric cancer. Duodenal ulcer is not considered a forerunner of malignancy.

Moynihan says 90 per cent. of ulcers are in the first one and one-half inches of the duodenum but cancers of the duodenum form only a small per cent. He asks: "If carcinoma so frequently arises from a peptic ulcer, why doesn't carcinoma occur more frequently in the duodenum where peptic ulcer abounds? Is it not probable that the histological and determining factor of carcinoma of the stomach is something entirely independent of peptic ulcer?"

Negative roentgen findings are important by excluding cancer. Especially is this true where the symptoms are of long standing and confusing, where the gallbladder or stomach might be at fault. In such cases a negative finding immediately excludes cancer of the stomach.

What can the roentgen rays do in establishing the diagnosis of early stomach cancer? They will show whether there is hindrance to swallowing. They will show whether there are any irregularities or filling defects. The painful points can be determined. The motility and the mobility of the stomach is shown. The roentgen ray furnishes decisive information for the operability of stomach cancer.

Suppose the stomach is found normal. The symptoms are there. What has the patient gained for the time and money expended? I will answer that question by citing a few cases.

CASE 1.—Mrs. R., aged 58, has complained of trouble in the stomach region for four years. Much gas, never jaundiced. Can eat fairly well but followed by much distress. Vomits regularly. Has lost 52 pounds, the most of which was lost in the past year. Has bad color and is getting weaker. Under the fluoroscope is seen a shadow about the gallbladder region. The barium shows the stomach and the bulb normal in outline. The motility was normal. The mobility in the bulb region was limited. The patients' gallbladder was filled with stones.

CASE 2.—Mrs. K., aged 52, has had indefinite stomach pains for a number of years. Her symptoms could be fitted to no particular disease. Weight and color are good but pains are acute, with some days fairly comfortable. While swallowing a barium mixture the esophagus is seen to empty into a sack above the diaphragm. This sack is seen to be in front of the heart and extending to the costal margin. Presently the barium is seen to run into a sack below the diaphragm. After getting the patient at ease the barium could be moved above or below the diaphragm. Here we had to do with a hernia of the stomach into the chest cavity.

CASE 3.—Mrs. S. was complaining from an uncomfortable feeling in the left lower quadrant of the abdomen. The ovary and tube were suspected



Fig. 1.—Annular carcinoma five hours retention.



Fig. 5. Carcinoma at pylorus, eight months standing, causing thirty-six hour retention.



Fig. 2.—Annular carcinoma twenty-four hours retention.



Fig. 4.—Small prepyloric carcinoma causing fifty hours retention.



Fig. 6.—Carcinoma of body of stomach. These cancers might be slow to disturb the patient.



Fig. 3.—Prepyloric carcinoma causing forty-eight hours retention.



Fig. 7.—Gall-stones giving symptoms of cancer.





Fig. 8.—Supposed malignancy. Adhesions following operation causing marked retention.



Fig. 12.—Duodenal ulcer, bulb deformity.



Fig. 9.—Gastroenterostomy for ulcer of stomach. Ulcer not excised; hour-glass remaining.



Fig. 11.—Duodenal ulcer five hour retention. Note the bulb deformity at arrow.



Fig. 13.—Arrow points at post-operative adhesions following excision of gastric ulcer.



Fig. 10.—Duodenal ulcer five hour retention.

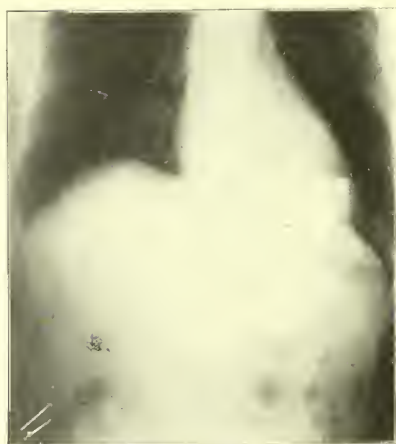


Fig. 14.—Hernia of stomach into chest. Note air bell in stomach extending to height of heart.

but there was no disturbance with her periods. Constipation was marked. Much disturbance followed the birth of her last child and adhesions were suspected for which reason she was referred to me. This case proved to be one in which the abdominal organs were transposed. The tenderness in the left lower quadrant was an adherent appendix.

Other cases could be cited to illustrate other complications.

Pauchet says half the cancers in the human race are in the stomach and three fourths of them are engrafted on old ulcers.

In 1912 W. J. Mayo said cancer of the stomach was the most frequent and the most hopeless form of cancer in the human body. The hopelessness can be much reduced by the early recognition.

Have recourse to the history, the laboratory with the clinical findings, the roentgen rays, and if necessary to the exploratory incision. Let us not wait for anorexia, vomiting, hematemesis, melena and occult blood in the stools, dysphagia, loss of weight, palpable tumor with dilatation of the stomach. That of course means a certain diagnosis. It also carries with it a certain prognosis.

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#### IMPRESSIONS FROM FIVE AND A HALF MONTHS SERVICE IN A BRITISH VENEREAL HOSPITAL IN FRANCE

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The period covered by this report begins Nov. 16, 1917, and ends April 28, 1918. During this time I was attached to British Stationary Hospital No. 1 at Rouen. This was the venereal hospital of the Rouen area and was at first one of three such hospitals attached to the British armies in France. Toward the end of the period under consideration a fourth venereal hospital was opened and was beginning to functionate at the time of my departure.

Stationary Hospital No. 1 had a capacity of 1,500 beds but could on emergency accommodate

as many as 2,000 patients. Admissions averaged about forty per day and the average stay in hospital was about six weeks. These are unofficial figures but are approximately correct. The hospital consisted of a large number of so-called Marquis tents each accommodating about sixty patients, and a smaller number of wooden structures, such as the officers' mess, the officers' quarters, the administration building, and the surgical hut, which was my particular care. This was situated near the middle of the grounds and was intended to accommodate all patients requiring surgical intervention as well as all cases who were seriously ill from any cause. As it contained beds for only about thirty patients their stay here was necessarily brief and they were promptly transferred to the so-called bed tents for convalescence. Each of these bed tents would accommodate sixty men and every medical officer attached to the hospital in other than an administrative or laboratory capacity had one under his care. This provided space for about 400 bed patients. Men awaiting operation but not seriously ill were also frequently allowed to lie in bed tents.

My duties were to care for all patients in the surgical hut above described, and to exercise a general supervision over the operating room and personnel. In addition I had charge of five Marquis tents, including a bed tent, and also one smaller square tent for warrant officers, staff sergeants, sergeant majors, etc. No commissioned officers were received as patients in this hospital. I was therefore directly responsible for the treatment of between 250 and 300 nonselected patients, excluding, however, all syphilitics and all patients with venereal sores; these were assigned to a separate department of the hospital. I also had an opportunity to observe all complicated cases wherever arising in the hospital as well as all that were admitted in a serious condition.

A consideration of these figures will show that it was impossible to see every patient every day, nor was it necessary. The surgical hut was visited twice a day as a rule; the bed tent once a day unless the sergeant's report, delivered to me every morning, showed that there were no patients with fever or in pain, in which case the visit might exceptionally be omitted. All ambulant patients paraded before the medical officer in the treatment hut two mornings a week, giving him from eighty to 120 such patients to see per day, and many of these were instructed to return in the late afternoon for special treatments such as prostatic massage, endoscopy, or the passage of a sound.

I cannot leave this phase of my subject without an expression of my high regard for the



noncommissioned officers of the British Army. Their intelligent and cordial cooperation was what rendered the proper handling of this enormous material possible. It sounds at first absurd to suppose that one physician could adequately inspect and direct the treatment of 120 patients in two hours' time, an average of one minute per patient, and yet it is really quite easy. With a sergeant seated at the table beside you and another opposite you, a third standing with the cards in his hand, and a fourth to line the men up in the order in which their names are called, the patients parade in an orderly sequence in which not a moment is wasted. Every patient is adequately questioned and inspected, including a frequent inspection of the urine. His history is glanced over and his treatment prescribed without any sense of hurry. A sergeant makes all notations from dictation. Frequent smears are made on request. Patients requiring prostatic massage or other special treatment are instructed to return in the afternoon, for it was my custom always to administer prostatic massage myself rather than trust it to an orderly. Irrigations are taken by the patients under supervision of a noncommissioned officer who provides each one with a sterile nozzle.

It is of course not possible to discuss in a single paper all the surgical aspects presented by this service. When, however, a vast material passes rapidly under the eye, one gains certain clinical impressions, and it is the salient features of this mass impression which I wish to present. And first as to the character of the cases.

No. 1 was known as a venereal hospital. Practically a strictly venereal hospital is impossible. We had therefore a nonvenereal tent. Also there was always a considerable number of cases in the other tents, the venereal nature of whose ailments could never be definitely proven; as for example, cases presenting a urethral discharge with consistently negative laboratory findings; cases of epididymitis without discharge or history of discharge a fair proportion of which proved to be tuberculous in origin; cases of stricture of uncertain origin; and cases of frequent urination, urgency or incontinence. Cases of pyelitis were found in patients who, on admission, accepted the diagnosis of gonorrhea without question, and on the other hand gonorrhea was frequently found in patients who denied the possibility of such a thing.

Surgical procedures consisted of operations for prostatic and periurethral abscess, including abscess of Cowper's glands, operations for the relief of stricture, urethral fistula, extravasation of urine, operations on the testicle, vasopuncture for the relief of seminal vesicu-

litis with or without the complication of rheumatism, and occasional operations elsewhere among which I should like to mention one for a blind internal anal fistula the discharge from which was reported by the pathologist to contain the gonococcus. This fistula was not connected with the prostate or urethra but lay well over to the right of the median line and manifested itself as a hard mass about the size of the last two digits of the little finger, and pus could be seen to exude from it through the speculum. The man was cured by a careful excision of this mass down to the muscular coat beyond which no pathology could be discovered.

I shall record my impressions briefly and shall say little theoretical. Where I draw conclusions they are based on clinical observation without regard to what my own previous ideas may have been, or what I may conceive to be the generally accepted opinion. My aim shall be to give a direct and accurate account of what I have observed.

On taking charge of the hut I found about a dozen beds occupied by patients long since bed-ridden with gonorrheal rheumatism. The secondary changes which had occurred in the joints of most of these patients were so extensive as to render all prospect of future complete mobilization appear practically hopeless. I got them all out of bed, however, massaged their prostates for a while, and then sent them all to England. I was impressed, however, with the fact that the immobilization of affected joints is the one thing above all others which we must avoid in the handling of gonorrheal rheumatism, and after that I adopted the following line of treatment:

Patients admitted with an acute rheumatism were put to bed without any immobilizing apparatus and the joint, generally one or both knees, was anointed with methyl salicylate. It was then wrapped in a loose flannel bandage. The patient was given large doses of potassium citrate by mouth, 45 to 60 grains three times a day until the urine became alkaline. The bowels were moved with a saline purge and a hot enema was given every morning thereafter. The urethra and bladder were irrigated twice a day with potassium permanganate  $\frac{1}{8000}$  but no prostatic massage was undertaken as long as fever was present. This, because in one case a too early massage seemed to delay resolution in the joints though there were no acute symptoms referable to the prostate itself. Ten c.c. of normal horse serum was administered subcutaneously, the dose to be repeated in forty-eight hours.

Under this treatment it was found that the fever had dropped to normal within twenty-

four hours and that pain was greatly relieved in almost every case. The patient was then told that if he desired to get out of bed for any purpose he might do so but must be careful not to hurt himself, and this even though there was still considerable fluid in the joint. It was felt that the patient's instinctive timidity and desire to spare the joint or avoid pain would give him all the physiological rest that he really required. The results were exceedingly gratifying. I did not see a single case that seemed to be any the worse for the use of his joints. Prostatic massage was generally begun within the first week. Recovery up to a certain point was rapid and uninterrupted. Then, if a little fluid persisted in the joint and secondary changes were feared, a vasopuncture was done and 5 c.c. of a 25 per cent. solution of argyrol was injected into each vas. None of these joints was aspirated, not because of any theoretical objection to aspiration but because they subsided rapidly without it. A few were blistered with a cantharidal plaster. Later I did aspirate an elbow and a knee joint while with the American forces, and I am inclined to think that the net result is not altered greatly by doing so, but that it is an entirely legitimate procedure if the surgeon desires a specimen of the fluid, or hopes to get his patient out of bed a little earlier. One patient resisted every form of treatment, had an intermittent fever for weeks and had almost every joint in his body involved. As it finally became evident that he could not be restored to duty within the prescribed six months he was evacuated to England. It may be of interest to mention that a vasopuncture stopped the fever in this case and that the patient was able to be up on crutches before his departure. It had been impossible to get him out of bed early or indeed until extensive secondary changes had occurred in his joints. I fear that he will remain seriously crippled for the rest of his life. The conclusion which I draw is that we should allow some use of the joints practically throughout an attack of gonorrheal rheumatism, and that the best way to prevent permanent crippling of joints is to avoid immobilization from the onset.

Another problem which confronted me almost at once was what to do with patients who develop a retention of urine during the course of an acute gonorrhea. We had many of these and I found it had been the custom to permit the orderlies to catheterize them at regular intervals. This was contrary to my ideas on the subject, and yet I must admit that I had never been quite satisfied in my own mind as to just what we ought to do with these patients. I was not, however, surprised when cases began to come into the hut which after several days

of intermittent catheterization had finally developed such a degree of congestion as to defeat all further attempts of the orderly to catheterize them. The first of these had already developed a prostatic abscess and this I opened with the finger after introducing it into the deep urethra through a perineal incision, establishing drainage of the bladder at the same time. The patient developed an epididymitis after the operation and the resulting fistula was very slow in closing. The next patient was in better condition and as he had already been catheterized a number of times I determined to attempt to introduce the catheter myself. I succeeded in doing so without great difficulty. It was late in the evening and my original intention had been to make him comfortable for the night and then consider the case further in the morning. With the catheter once in place, however, I determined that I was not going to subject him in any case to a repetition of the procedure and I tied it in for the night after irrigating the bladder with a mild solution of silver nitrate. In this connection it may be said that the patient presented no very acute urethral symptoms and indeed this was true of all subsequent cases. The retention was due to a swollen prostate with possibly a small abscess forming close to the urethra, a condition which does not ordinarily develop until after the acute inflammation in the anterior urethra has subsided. In the morning I found my patient perfectly comfortable. He had no fever and complained of no pain. The pressure of the catheter did not annoy him in the least. I decided to leave it there a little longer. It remained in place altogether three days. The bladder was irrigated through it once a day with a solution of silver nitrate. It slipped out during the night, I believe, and after that he was able to void a full stream of urine without the slightest difficulty. He made a rapid and complete recovery. I then employed the same procedure on a number of subsequent cases and soon adopted it as a matter of routine in all. Not one of these patients developed any complication such as a chill or an epididymitis. Not one of them complained of any pain from the presence of the catheter. In only one case did the retention recur after the removal of the catheter and with him it had to be reintroduced. All patients made prompt and clinically complete recovery so that they were suitable for a very early discharge.

My reflections on this are as follows: Retention of urine occurs after the acute urethritis has subsided. Catheterization is therefore not excessively painful. Intermittent catheterization increases the congestion, defeating its own purpose. The retained catheter by constant



gentle pressure expels the edema from the prostatic urethra, possibly it favors the early rupture into the urethra of a small prostatic abscess. It certainly restores the patency of the canal. It is attended by less risk of complication and followed by a more rapid convalescence than any operative procedure can offer us. If this is heresy I stand committed. It is an account of my observations on a very respectable number of cases.

In logical sequence comes a consideration of the subject of prostatic abscess. Cases presenting this complication were passing through the hospital in a fairly constant stream and the composite picture left with me is very definite. Gonorrheal abscess of the prostate may be relied on to point in one of two directions, either into the urethra or into the perineum. Cases reported as pointing elsewhere are to be regarded with the gravest suspicion. They are probably tuberculous or metastatic or at any rate due to some other cause than the gonococcus. Those which point into the urethra are generally of small size, and do not require surgical intervention unless they give rise to a retention of urine. Then the condition can practically always be relieved by the retained catheter left in place for forty-eight to seventy-two hours. In no case should the surgeon attempt an operation for the lancing of the abscess unless he is certain that he knows just where the pus is located and can cut down on it easily. If he is in the slightest doubt it is always safer to wait. If the abscess does not point into the urethra it will certainly point toward the perineum and can then be explored very easily. In the majority of cases, in the Army at any rate, the condition first declares itself as a painful, brawny induration in the perineum which can be detected by the fingers on palpation. At this stage the pus is still deeply situated but is beginning to break through the prostatic capsule and a careful exploration of the perineum will lead the surgeon directly to it. He can then introduce a finger into the abscess cavity and break up bands of necrotic tissue. Occasionally it will be possible to operate before any infiltration or marked tenderness has appeared in the perineum. A prostate which on rectal palpation is found to be very large, very hard, and very smooth, as well as very sensitive, giving the impression of a very tense membrane drawn tightly over a contained fluid, is certainly the receptacle of an abscess. It requires, however, considerable experience in prostatic palpation before the surgeon can detect with certainty those conditions which will require operation. A prostate may answer the above description fairly accurately and still contain no single abscess of sufficient

size to warrant intervention; therefore when in doubt it is safe to wait.

Periurethral abscesses should be opened early. There is just one danger involved in these and that is that they may open into the urethra before we have lanced them through the skin thus giving rise to a fistula. An early incision will enable us to escape this complication.

There were in the hospital at all times from forty to sixty cases of testicular disease, as nearly as I can estimate it, and while I did not see all of these I did see all that were suspected of being other than a simple gonorrheal epididymitis, and of course all that were thought to require operation. As regards this material I shall mention only certain things which particularly impressed me. A gonorrhea attacks the lower pole of the epididymis in the overwhelming majority of cases. A tuberculosis attacks either pole with about equal frequency. A diffuse adhesion of the skin may accompany any intense inflammatory process, and as gonorrhea is more common than tuberculosis it is generally due to a gonorrhea. Abscess follows in less than half of these cases. An abscess appearing through such an adhesion over the body of the testicle is not tuberculous. Tuberculous disease has frequently an acute onset very similar indeed to that of a gonorrheal epididymitis. Tuberculous diseases of the epididymis may exist without any nodules in the prostate or vesicles which can be felt by the finger in the rectum. A nodule about the size of a pea situated just where the seminal vesicle joins the prostate may be tuberculous but generally it is not. Similar nodules situated elsewhere in the prostate are as a rule tuberculous, but they must not be larger than a small pea. Hematuria observed by the patient himself is rarely due to tuberculosis. The majority of my cases came from a chronic gonorrheal prostatitis. Finally, it is often impossible to distinguish a tuberculous from a nontuberculous epididymitis on a single clinical examination. In such a case the patient should be put to bed and watched. Tuberculosis will undergo no great amount of resolution whereas a gonorrhea will.

I shall not attempt to discuss cases in detail or to describe the unusual cases. My purpose has been to deal only with those things which are common and of which I saw constantly a considerable number, and I have aimed to portray a composite picture of this material, one which is accurate, and which it seems reasonable to believe would be found equally descriptive of any similar material brought to it for comparison.

## CHRONIC INFLUENZA

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During the fall of 1918 the student body of the University of Missouri was stricken with the pandemic of so-called influenza that was sweeping across the continent. The clinical characteristics that marked its acute course have been previously described.

In general, the acute stage of the disease presented one of two clinical pictures. In both there was the abrupt and usually violent onset. One type of the disease presented the picture of a systemic infection in which a progressive hemorrhagic pneumonitis ending in consolidation was the dominating feature. That this was a true septicemia, however, was shown by the finding of the etiological organism in the blood as early as the first day of the fever; there were also hemorrhages from other parts of the body, i. e., gastro-intestinal tract, urogenital tract, nasal passages, etc.

The second type presented the picture of a more or less severe septicemia. In this type there was always some sign or signs of lung involvement, such as localized areas of râles, cog-wheel breathing and often small areas of bronchial breathing usually along the lower vertebral borders of both lungs, causing, however, very little coughing and expectoration and never any evidence of bleeding. The lung involvement, however, was insignificant compared with the evidence of a septicemia. This second type of influenza ran a much more protracted course than the first. In the second or septic type the same organism was found in the blood stream.<sup>1,2</sup>

Since Christmas, influenza has almost disappeared from our community but we are seeing a number of chronic ailments among individuals who had influenza last fall and which I consider to be a chronic infection with the same organism that caused the acute form of the disease.

This organism is a gram-positive diplococcus or diplostreptococcus, that grows readily on ordinary media and was obtained from the blood of at least 90 per cent. of the cases of influenza of all types. It was found early in the onset of the disease and remained present in the blood stream until death. One-fourth of a cubic centimeter of a twenty-four hour bouillon culture of this organism injected into the ear vein of rabbits caused death within forty-eight hours.

On necropsy the rabbits so dying showed an extensive pneumonitis which was identical in gross inspection with that seen in our human necropsies, while microscopic section showed a hemorrhagic pneumonitis similar to that found in human lungs when the individual had succumbed during the early stages of the disease. This same organism was recovered from the heart's blood and lung tissue of the dead rabbits. The blood of patients convalescing from influenza agglutinated this diplostreptococcus.

A similar organism has been described by Dunn;<sup>3</sup> Little, Garofalo and Williams<sup>4</sup> constantly found a gram-positive diplococcus in the upper air passages of patients suffering from influenza; Averill, Young and Griffith<sup>5</sup> found the same organism in the nasal secretions of forty-three cases; Gruber and Schadel<sup>6</sup> found a diplostreptococcus persistently in a series of 250 cases; a gram-positive diplostreptococcus was described by Bernhardt,<sup>7</sup> also by Bernhardt and Meyers.<sup>8</sup> The infrequency with which the influenza bacillus of Pfeiffer has been found has been noted by so many observers that it is unnecessary to mention them. That the etiological factor is not a filterable virus is indicated by the experiments of Nuzum and of Keegan.

After recovery from the acute attack of influenza there is more or less prostration and a subnormal temperature persists for some days or weeks. This is followed by a marked improvement and gain in weight and strength. However, in a certain percentage of our cases, after a few weeks or several months, the individual experienced a relapse, i. e., return of the fever, headache and malaise, sometimes ushered in by a chill, and often accompanied by nausea, intense vertigo and a peculiar hypersensitiveness of the skin which was a very frequent symptom of the acute attack. The relapse rarely lasted more than seventy-two hours and did not present any of the physical signs of influenza except fine râles heard over the lungs. These relapses varied much in severity. Blood cultures taken during the relapse show the same organism described above. The factors producing a relapse are usually "taking cold" and over-exercise. When the university track team started its spring training there was a marked increase in the number of athletes reporting to the hospital with relapses from influenza infections acquired last fall.

3. Jour. A. M. A., Dec. 28, 1918.

4. Lancet, London, July 13, 1918.

5. Brit. Med. Jour., Vol. 11, p. 111.

6. München. med. Wchnschr., 1918, 65, 905.

7. Med. Klin., 1918, 14, 683.

8. Berl. klin. Wchnschr., 1918, 55, 778 and 814.

1. Mo. State Med. Jour., January, 1919, Vol. 16, p. 10.

2. Medicine and Surgery. Not yet published.



This reinfection of the blood stream from foci within the body is the commonest type of chronic influenza.

Some exacerbations of this chronic infection are very mild as illustrated by Case A.

CASE A.—Out patient, Miss H., aged 22, student, October 13. While nursing brother sick with influenza showed symptoms of same disease. Headache, backache and cough. Temperature, 104.3 F. Was taken care of at home by private physician but undoubtedly had influenza. Was in bed ten days.

March 5 came into student clinic complaining of debility, various pains and headache. Temperature, 99.2 F. Physical examination negative. Blood culture taken; growth of diplostreptococcus in forty-eight hours. Patient refused to take vaccine but recovered with three days rest in bed. Has been well since.

Other exacerbations of the dormant infection are more violent as illustrated by Case B.

CASE B.—Hospital 7,572, student, aged 23. Had influenza during October epidemic. History at that time shows he had small consolidation in left lower back and was in bed for seven days. Is candidate for track team. Was admitted to hospital on January 18 with history of just having had a chill. Temperature, 104.6 F. Vomited all that night and complained of severe pain in head and back. Physical examination negative except fine râles over both lungs. Temperature normal within seventy hours. Blood culture positive for diplostreptococcus. Rest for eight days. No farther relapse.

Other cases show a tendency to repeated exacerbations of their infection; in some this tendency is so marked that any unusual exertion or fatigue will precipitate a relapse. This is well illustrated in Case C.

CASE C.—Hospital 7,164. Principal of Training School for Nurses. Was first of nursing staff to go down. Admitted to hospital on October 2. Temperature, 101.2 F. Nausea and vomiting.

October 3, numerous consolidations over whole of right lung; friction rub over right axilla and right lower back. Temperature, 104 F. No improvement for six days. Temperature normal on the ninth day. Confined to room until November 16 on account of mild nephritis. Discharged as cured November 16. Sent home to recuperate. Returned to duty Dec. 13, 1918.

Jan. 1, 1919, was in bed five days with headache, malaise, vomiting. Temperature, 100 F. Leukocyte count, 6,800. Urine normal.

January 20, same, seven days. Temperature, 99.6 F.

February 10, same, four days. Temperature, 100.2 F.

February 24, same, three days. Temperature, 99.2 F. Leukocyte count, 7,400. Urine normal.

March 13, same, four days. Temperature, 99.4 F. Leukocyte count, 7,400. Urine normal.

April 1, same, four days. Temperature 99.2 F.

March 15, blood culture; diplostreptococcus.

March 19, vaccine started (1,000,000,000 killed diplostreptococci at each dose); six doses, four days apart. No headache since April 1.

There are cases that simulate tuberculosis so closely that blood culture is useful in differen-

tiating between the two infections. Case D illustrates how nearly it can simulate an incipient pulmonary tubercular infection.

CASE D.—Hospital 7,763, married, aged 30. Early in November while nursing husband acquired influenza. Pronounced such by physician who was attending husband. Not sick enough to stay in bed.

Patient came to my office on February 10 to have chest examined. Had been coughing and having slight afternoon fever for several weeks. Physical examination negative except for fine moist râles over both lungs. Radiographic examination of chest was negative. Sputum showed large numbers of diplostreptococci. No tubercule bacilli. Patient was seen again at my office February 27. History and findings were the same. Had lost considerable weight.

March 16 was admitted to hospital. Hospital 7,763. Temperature, 101.2 F. Had just had a chill, now was suffering with headache and general muscular pain. Skin was hypersensitive. Physical examination negative except fine râles over both lungs. Next day temperature was 97.6 F. and remained normal for several days. Leukocyte count, 7,200. Sputum still showed diplostreptococci and no tubercule bacilli. Blood culture gave a growth of diplostreptococci in forty-eight hours. Was given vaccine (dose 1,000,000,000) on March 18 and 24, and April 3. Has gained much in weight, somewhat in strength and has not had any fever or cough since March 18.

Chronic influenza in patients who have a recognized dormant tubercular lesion offers many diagnostic difficulties as illustrated in Case E.

CASE E.—Hospital 7,282, instructor, aged 30. When 4 years old had tuberculosis of left hip. Has had nineteen operations for its relief; last one was in 1916. His hip has seemingly been well since. Lungs have always been found normal and repeated examinations of his sputum have never shown any tuberculosis.

A previous diagnosis of his condition has been, "A bovine tubercular infection of the colic lymph nodes and a bovine tuberculosis of left hip joint."

Patient entered hospital Oct. 28, 1918, with influenza. Temperature, 101 F. Pain in back, headache, photophobia and nausea. Immediate improvement and patient was discharged as well on the sixth day. Normal until December 16.

On December 16 was sent to bed with all the symptoms described above, plus an intense vertigo. The least movement of the head on the pillow would produce nausea. Temperature ranged about 100 F. Out of bed in seven days. Normal temperature and felt better for more than a month. No coughing at any time.

On January 20 was called to see patient again. Temperature, 101 F. Headache and chills. For eighteen days patient was very sick. Chill and higher fever every other day. Marked tenderness of muscles and hypersensitiveness of skin. No vomiting. No vertigo. Sick in bed until March 2 (thirteen days). Has lost 20 pounds in weight since last fall. No change in condition of left hip. Examination of blood for plasmodium malariae negative. White count, 8,200. Blood culture, forty-eight hours, showed a profuse growth of diplostreptococcus. Vaccine, 1,000,000,000 killed diplostreptococci on March 5, 17, 24 and 28.

Has had no fever since March 2. Has gained considerably in strength and weight (8 pounds).

I feel sure that this is not a lighting up of an old tubercular process but a case of chronic infection with the diplostreptococcus. Sometimes one meets with a chronic infection of the respiratory passages due to the diplostreptococcus (bronchiectasis); when there is no evidence of a systemic infection. This condition is so commonly wrongly diagnosed as tuberculosis that I will describe Case F to illustrate.

CASE F.—Mrs. M., aged 42, married, farmer's wife. Was sick first week in January. High fever, cough, headache, and photophobia. Did not have a physician. Continued to do household duties. Recovered in seven days and felt well except for slight cough until March 1 when she had a relapse. Did not go to bed or see a physician but continued to cough. Cough grew worse. Expectorated profusely, especially on rising in the morning.

Saw patient in my office for the first time March 21, 1919. Temperature, 101 F. Face rather flushed. Physical examination negative except for rather loud moist râles over base of both lungs and areas of cog-wheel breathing over back of both lungs. Apices fairly clear. Frequent sputum examinations showed large number of diplostreptococci but never any tubercule bacilli. Blood culture showed growth of diplostreptococci. White count, 10,200. With rest and syrupi acidum hydriodici patient made a marked improvement, is free of fever part of the time and goes for days without coughing.

The blood culture is an aid in diagnosing chronic influenza in the presence of a latent lesion due to other forms of cocci. Case G illustrates this.

CASE G.—Hospital 7,136, student, aged 27. In 1917 had a staphylococcus infection of right knee joint and upper right tibia. On Sept. 25, 1918, was admitted to the hospital with influenza; out in seven days. Was readmitted on Feb. 3, 1919, with temperature 101 F. No headache or other symptoms. No evidence of lighting up of old myelitis. White count 7,800. Blood culture showed growth of diplostreptococci. Out in five days. Has been well since.

When one sees so many cases of chronic influenza following a large epidemic such as we experienced last fall one is likely to be too quick to make that diagnosis. The blood culture has a negative as well as a positive value and I will illustrate this with Case H.

CASE H.—Seen April 16, 1919, with Dr. Kampschmidt, Columbia, Mo. A. X. Y. Automobile mechanic, aged 28.

Oct. 7, 1918, developed influenza with bronchopneumonia, principally in lower lobe of right lung. Had dry pleurisy over same area. Temperature normal in ten days. Recovered completely in three weeks.

Feb. 27, 1919, while in another city was sent to a hospital with a "second attack of influenza." Temperature at that time was 104 F. and more for four days. No pneumonia according to physician attending him. Left hospital on seventh day. Next day had temperature of 101 F. Returned to Columbia, March 7. Ran a mild fever almost continuously, at times being normal in the morning. Great deal of sweat-

ing; no chills. March 25 examination of blood for malaria, negative. *Blood culture, negative.* Temperature was getting higher.

I saw the patient on April 6. Physical examination negative except for chest. There were subcrepitant râles over both lungs and a thickened pleura over lower lobe of right lung. Heart apex was 2 c.c. beyond clavicular line. A diastolic murmur was heard over whole precordia and a systolic murmur that was not audible over precordia was heard in midaxillary line. Dr. K. stated that the condition of the heart had remained as described since an attack of endocarditis some sixteen years ago, and that there had been no change in the character or position of the abnormal sounds. The pulse was regular, rhythmic and its rate 110 F. Temperature at the time of my visit was 103 F. My opinion was that in all probability the condition was due to chronic influenza and ordered another blood culture. White count, 8,200. *Blood culture, April 8, negative.*

On April 9, patient developed suddenly an arterial thrombus of artery to large toe, left foot. On April 11 arterial blood supply to middle and ring fingers of right hand was blocked. The patient has since shown a very definite picture of an endocarditis, due probably to the old dormant endocardial infection.

#### CONCLUSIONS

The term influenza is misleading. To attribute all the phenomena of the acute and chronic conditions seen during and following the epidemic of last fall to Pfeiffer's bacillus or Pfeiffer's bacillus accidentally complicated by other infection is illogical. It would be better to term it an *epidemic pneumonitis* bearing in mind that the pneumonitis is only an important manifestation of a systemic infection.

The etiological agent is probably a diplostreptococcus found in the nasal secretions and in the blood stream.

This organism not only causes the acute attack of pneumonitis but often remains as a chronic infection in certain foci (probably bronchial and mediastinal lymph nodes) from which it can reenter the blood stream.

The symptoms produced by these relapses are characteristic. There is nearly always headache, muscle tenderness and pain. Often there is nausea, vertigo and a hypersensitiveness of the skin. Examinations of the chest will show subcrepitant râles over both lungs. If the patient had an extensive pulmonary consolidation, especially if accompanied by a pleurisy, there often will be a return of pain to that portion of the chest at the time of the relapse without any signs of any changes in the lung or pleura.

The blood culture is a positive and negative aid in establishing a diagnosis when there is a lack of definite signs or symptoms.

Chronic infections with the diplostreptococcus follow all types of "influenza," both the mild and severe, the septic and pneumonic types.



# THE JOURNAL

OF THE

## Missouri State Medical Association

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JUNE, 1919

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### EDITORIALS

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#### THE EXCELSIOR SPRINGS MEETING

With the close of the sixty-second annual session of the State Association on May 28 at Excelsior Springs one of the most interesting and successful meetings of the organization passed into history. Not alone in the scientific value of the papers on the program and the orderly conduct of the business in the House of Delegates was the meeting a pronounced success but all the branches of the Association—the Council, the County Secretaries' Association and the various reference committees—were prompt in attending to the work before them. The attendance was a surprising feature, there being 434 members registered as against 324 last year.

The House of Delegates amended the by-laws in two conspicuous places, both amendments being suggested by the Council. One amendment provides that the House of Delegates shall meet on the second day of the annual session for the election of officers and to complete unfinished business. No new business can be introduced at this session without the unanimous consent of the delegates. This provision will give the delegates more time to deliberate on and discuss questions of importance before taking the hasty action that was frequently necessary when all business was finished at one day's session.

The other amendment to the by-laws gives the Council discretionary power to remit the state assessment of a member who may become totally incapacitated through mental or physical disability if that member has been a member in good standing for the previous three years and if the county medical society of which he is a member remits his county society dues. Such a provision is a wise and just measure and has been surrounded with sufficient safeguards to prevent its abuse.

Two resolutions were adopted addressed to Governor Gardner, one of them asking the Governor to use the power of his office to restore Dr. F. W. Shaw, a returned officer in the Medical Department of the Army, to his former

position as physician in the State Sanatorium for Tuberculosis, and the other appealing to him to invite the National Committee on Mental Hygiene to make a survey of the mentally deficient population of the state.

The Victory Meeting was an inspiring session. Dr. Herman E. Pearse delivered a dedicatory speech that was cheered and applauded at frequent intervals and the dedication of the service flag was a profoundly impressive moment in which all the members recognized its significance as a mark of the part played by physicians in the great war. One speech not on the program was demanded when it became known that Dr. George R. Dagg of North Kansas City was in the hall. Dr. Dagg has been decorated by the British, the French and the American armies and has been cited eleven times for distinguished service. We hope to publish a full list of these citations, although we could not at the time of the meeting pry the information loose from Dr. Dagg. He spoke for a few moments and was loudly applauded. The members could not allow the Victory Meeting to close without a few words from Dr. Binnie and loudly called for a speech from him. Dr. Binnie, who had declined a place on the program that others might speak on the work of Base Hospital No. 28, responded in his characteristically brief style and thanked the members for their interest. The pictures of life overseas, in camps, and on board the transports, presented and explained by Dr. Proetz, were highly interesting. Many of these pictures were creations of Dr. Proetz's artistry which he was compelled to utilize because all cameras were confiscated soon after the arrival of the members on foreign soil.

The scientific sessions were well attended, the interest in the papers well sustained and the defections among those who had promised to read papers were few. The folly of attempting to read and discuss more papers than the time allotted for scientific work will permit was again demonstrated when the discussion was ordered discontinued after the morning session of the second day of the general meeting. After we have asked a member to open the discussion on a paper we should do our part to see that he is given the opportunity to discharge the duty laid on him and therefore it is an injustice to such a member and unfair to the essayist to crowd the program with more papers than can be easily disposed of.

The County Secretaries' Association grows better and more valuable as the annual gatherings come and go. This was the eleventh meet-

ing of the county secretaries and proved its worth by the earnest interchange of thought and opinion on the best methods of maintaining the integrity of the component society and instituting measures to increase their usefulness. It has grown from a small beginning, when a half-dozen secretaries would meet to plan the year's work, until now the attendance is almost one-half of the organized counties. The banquet tendered the secretaries by the Association was an enjoyable feature, enlivened by the wit of its retiring president, Dr. J. J. Gaines; by the love-making story of our new president, Dr. N. P. Wood; by Dr. McComas' speechmaking story, and Dr. Hamel's humor. But all these gentlemen and others who spoke gave the secretaries earnest assurance that the Association appreciates and tries to reward the services of the county secretaries who faithfully endeavor to hold their organization together.

The members who are interested in X-ray therapy held a meeting during the session for the purpose of organizing a roentgen-ray society to be composed entirely of medical graduates who are members of our Association, and the state anatomical board held its annual session at the meeting.

No attempt was made this year to apply the law strictly concerning the payment of dues before the time of the meeting, but when the 1920 meeting takes place there will be no such confusion about the standing of members as was unavoidable this year and all will be expected to comply with the by-law that requires every one to be paid up before he can enjoy any of the privileges of the meeting.

The treasurer's report disclosed that the financial status of the Association is most gratifying, there being a balance of \$13,272.91 on hand. When it is remembered that the balance in the treasury at the end of the fiscal year was annually a large, round zero, until about eight years ago, the present balance indicates a steady and healthy growth. The House of Delegates appropriated \$500 for the use of the defense committee and transferred \$1,000 to the sinking fund. The membership made good progress also, the total number now being 3,376, an increase of 119 over last year.

The election of Dr. N. P. Wood to the presidency is a recognition of a worthy member, one who has unselfishly sacrificed his personal interests to advance the welfare of the Association, who has rarely failed to be present at the annual meetings, whose wide acquaintance with the members, and whose wisdom and good judgment are assurances that the affairs of the Asso-

ciation have been placed in the hands of one who enjoys the confidence and esteem of every member. The other officers elected are: First vice-president, J. J. Gaines, Excelsior Springs; second vice president, E. F. Yancey, Sedalia; third vice president, W. A. Clark, Jefferson City; fourth vice president, A. M. Gregg, Joplin; fifth vice president, J. C. Lyter, St. Louis; secretary, E. J. Goodwin, St. Louis; treasurer, J. Franklin Welch, Salisbury. Councilors: Fifteenth district, L. J. Schofield, Warrensburg; twenty-second district, H. L. Reid, Charleston; twenty-sixth district, W. H. Breuer, St. James; twenty-seventh district, J. C. B. Davis, Willow Springs; twenty-eighth district, A. L. Anderson, Springfield; twenty-ninth district, R. L. Wills, Neosho. Delegates to the American Medical Association, R. M. Funkhouser and A. F. Koetter, St. Louis. Defense committee, R. E. Schlueter, C. E. Hyndman and R. S. Vitt, St. Louis. Member committee on health and public instruction, J. Frank Harrison, Mexico. Member committee on cancer, W. K. Trimble, Kansas City. Member committee on vaccination, George H. Jones, Jefferson City.

Jefferson City was selected as the place of meeting for the 1920 session.

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## MY WORK

"My work, my work! I must go to my work!"

Unmindful of self even at the approach of death Miss Jane A. Delano, director-general of the American Red Cross Department of Nursing, displayed to the very end the spirit that ever dominated her life and these were the last words she murmured before lapsing into unconsciousness from which she did not emerge. Details of the last hours of the woman who mobilized the nursing strength of the nation for war service are revealed in a letter from Col. W. E. Cooper, M. C., U. S. A., commanding the hospital center at Savanay, France, where Miss Delano died, to Major-Gen. Merritt W. Ireland, Surgeon-General of the Army.

"Knowing that you are especially interested in Miss Delano's case," wrote Colonel Cooper, "I am sending directly to you a copy of her case history. It will seem in this history that she made a very remarkable fight for her life, and I think it is due a great deal to the remarkable personality and will power that she had.

"I really feel that everything possible was done for Miss Delano, and think that her case was quite exceptional in many ways. Everyone, I think, was especially interested in her and did



everything possible that could have been done. It was thought at all of the operations that her case was practically hopeless, but she rallied each time and her life was not despaired of until the last operation when streptococcus hemolyticus infection developed.

"Miss Stimson (chief nurse of the A. E. F.) was down from Tours, and several of the Red Cross representatives from Paris were here. We gave Miss Delano a military funeral, and had what I considered a very beautiful and fitting ceremony. There were about 350 nurses and attendants at the funeral, and probably 1,000 people altogether were in the funeral procession.

"Miss Kerr arrived from Washington the same day that the last operation was performed, and Miss Delano, while very sick, recognized her and seemed very happy to see her. The last words of Miss Delano, before sinking into unconsciousness were, 'My work, my work! I must go to my work!'"

A memorial service for Miss Delano was held under the auspices of the southwestern division of the Red Cross at St. Louis, May 13.

A life of service for others, the most beautiful and complete life that can be lived, is ended. But the influence of Miss Delano's example will never die.

### ERRATUM

We have just learned that the information given to us concerning a change of address for Dr. Frank B. Hiller of Kansas City, formerly secretary of the State Board of Health and now a member of Jackson County Medical Society, was erroneous. There happens to be another Dr. Frank B. Hiller, who lives at Pinckneyville, Ill., and the postmaster at Kansas City notified us that our Dr. Frank B. Hiller had moved to Pinckneyville, Ill. Dr. Hiller has recently returned to Kansas City after almost two years' service in the army, and we make this correction so that our members will know that he has returned home and resumed his practice in Kansas City.

### OBITUARY

#### GEORGE LEE DINES, M.D.

WHEREAS, The Supreme Ruler of the Universe has removed from us one of our members, Dr. George Lee Dines, in the prime of manhood, only 44 years of age; be it

*Resolved*, That we, the members of Madison County Medical Society, have lost a faithful member, he paying his pro rata to our members in the war service until he had to leave his office, expressing at that time that it was his supreme regret that he was compelled to quit practice and would thereby not be able to keep up his payment. Dr. Dines was faithful to his patrons, attending them until his strength had ebbed away, making it a physical impossibility for him to attend them longer; be it further

*Resolved*, That we extend to the father and mother in the death of their son, the last of six children, our heartfelt sympathies; and to the wife and daughter our sincere condolence and wish for them that the same kind hand that watches over all of God's children may sooth their sorrow and sweeten life's journey; be it further

*Resolved*, That copies of these resolutions be furnished the father and mother and the wife of our deceased member, and copies be furnished our local paper and the State Medical Journal.

C. A. ANTHONY, M.D.

M. B. BARBER, M.D.

F. R. DEHONEY, M.D.

Committee.

#### A. J. DETWEILER, M.D.

WHEREAS, Deep, vast and inscrutable are the mysterious springs of hidden human life, and no man may know for himself or another what a day may bring forth; and because of the dark inscrutableness of the shadows that veil the future the living are strangely moved and bowed under a common sympathy when the event and circumstance of death befalls a friend and fellow mortal, for sooner or later all who live must give up the ghost; we labor and pursue; we suffer and fret out life's brief span, nor know what goal we shall attain until the race is run; but God is in all and over all, and in His grace alone have we hope; therefore be it

*Resolved*, That we have learned with profound sorrow and regret of the death of Dr. A. J. Detweiler; and that we express our sincerest condolence to the bereaved wife of our deceased friend and collaborer.

*Resolved*, That in his death Marion County Medical Society has lost a loyal and eminent representative, and as an evidence of our esteem we are impelled, both by the obligations of friendship and a sense of our personal loss in professional association, to express this memorial of one whose splendid attainments always gave zest and interest to our meetings and wise instruction and profit to our deliberations.

*Resolved*, That in his death, the State Medical Association as well as the profession at large has lost a most worthy exponent; one whose study, research, and knowledge not only easily distinguished him as a high class physician, but equally so as a man of broad culture and refinement.

*Resolved*, That a copy of these resolutions be spread upon the minutes of the Marion County Medical Society, and the secretary be instructed to transmit a copy to the wife of our deceased associate, and also a copy to THE JOURNAL OF THE STATE MEDICAL ASSOCIATION, and to the Hannibal Courier Post.

J. J. BOURN, M.D.

ROBERT H. GOODIER, M.D.

MARY S. ROSS, M.D.

Committee.

## NEWS NOTES

DR. JOHN O'CONNELL, formerly of St. Louis, has been honorably discharged from the army and moved permanently to Pomeroy, Iowa.

Dr. T. B. M. Craig of Nevada has been appointed superintendent of State Hospital No. 3, to take the place of Dr. William P. Bradley who has resigned.

The second annual convention of the Society of Progressive Oral Advocates will be held at St. Louis, June 23, 24, 25. All interested in the oral education of the deaf and the correction of defects in speech are invited to attend.

The health commissioner of St. Louis County reported the Mothers and Babies' Home in University City to be in an insanitary condition and the Board of Aldermen ordered the proprietors of the institution to make extensive alterations or move out.

The faculties, student body and alumni of Washington University, St. Louis, held a memorial service for Washington University men who gave their lives in the great war, Friday afternoon, May 30, at the Graham Memorial Chapel, University Campus.

The Washington University School of Medicine, St. Louis, has been tendered the sum of \$150,000 by the General Education Board on condition that an equal amount be raised by subscription. This fund of \$300,000 is to be used for the endowment of the Department of Pharmacology.

The Thirty-second Annual Convention of the American Association of Official Surgeons will be held at the Congress Hotel, Chicago, September 15, 16, 17. The forenoons will be given to operative demonstrations at the hospital. The program will be replete with practical addresses, essays and papers by prominent officials. The clinics will be interesting as usual.

Col. D. Antoine Le Page of the Belgian Army, accompanied by Dr. Wicklife Rose, director of the International Health Board, and Dr. Abraham Flexner, secretary of the General Education Board of the Rockefeller Foundation, visited the medical school of the Washington University and were entertained by the faculty of the institution June 1. Colonel Le Page had charge of a hospital in Belgium and it was he who induced Edith Cavell, the English nurse who was executed by the Germans for assisting young civilians to escape and join the Belgian Army, to go to Belgium. Colonel Le Page had

expressed a desire to visit the Washington University Medical School and Dr. Flexner said the Rockefeller Foundation sent Colonel Le Page to St. Louis for that purpose.

DURING March and April the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Swan-Myers Company: Swan's Mixed Acne Bacterin (No. 41); Swan's Pertussis Bacterin (No. 38) (Prophylactic); Swan's Mixed Furunculosis Bacterin (No. 39); Swan's Typhoid-Paratyphoid Bacterin (No. 42) (Prophylactic).

Abbott Laboratories: Barbitol-Abbott Tablets, 5 grains.

Lederle Antitoxin Laboratories: Anti-Anthrax Serum (Lederle); Antidysenteric Serum (Polyvalent) (Lederle); Tuberculin von Pirquet Test ("T. O.") (Lederle); Tuberculin Subcutaneous Test ("T. O.") (Lederle); Tuberculin "B. E." (Bacillus Emulsion) (Lederle); Tuberculin "B. F." (Bouillon Filtrate) (Lederle); Streptococcus Vaccine, Polyvalent (Lederle); Paratyphoid Vaccine (Lederle); Schick Test (Lederle); Mercurialized Serum-Lederle; Diphtheria Toxin-Antitoxin Mixture-Lederle.

Non-Proprietary Articles: Mercurialized Serum; Diphtheria Toxin-Antitoxin Mixture.

## MEMBERSHIP CHANGES

### NEW MEMBERS

Althaus, Carl Jacob, St. Louis.  
Clark, Edward H., Kansas City.  
Elkins, William Harry, Sedalia.  
Falk, Oswald P. J., St. Louis.  
Fuerth, Arthur L., St. Louis.  
Heid, Lloyd L., St. Louis.  
Heinrichs, J. C., St. Louis.  
Hellrung, Frank J., St. Louis.  
Jones, H. L., Kansas City.  
Koenig, George H., St. Louis.  
Marsh, H. S., Kansas City.  
Maxey, S. W., Pueblo, Colo.  
McIntire, John C., St. Louis.  
Oehler, Emanuel F., St. Louis.  
Phelan, Emma, St. Louis.  
Sebastian, John P., Williamsville.  
Stein, William F., St. Louis.  
Stratton, Samuel O., Lincoln.  
Tillmanns, Charles S. J., St. Louis.  
Wallendorf, L. H., Kansas City.  
Wilhelmi, Otto J., St. Louis.  
Winterer, Charles H., St. Louis.  
Yoell, Rodney A., St. Louis.



## CHANGES OF ADDRESS

Bailey, Fred, 633 Metropolitan Bldg., St. Louis, to University Club Bldg.

Ball, Harry P., 1208 Broadway, Kansas City, to 700 Rialto Bldg.

Bowman, Dora E., 1008 Rialto Bldg., Kansas City, to 40 Water Works Bldg.

Bullock, E. H., 3225 E. 29th St., Kansas City, to 3347 Harrison St.

Coats, C. C., Winston, to 716½ Felix St., St. Joseph.

Cullers, C. H., Spickard to Trenton.

Damron, M. R., DeWitt to Brunswick.

Garrison, Benjamin E., Lathrop Bldg., Kansas City, to 309 Argyle Bldg.

George, J. H., Leeds to 3724 E. 27th St., Kansas City.

Hatch, Fred J., 810 Rialto Bldg., Kansas City, to 307 Bonfils Bldg.

Heibner, Eugene A., Greenridge to 208 E. 13th St., Sedalia.

Heryford, William B., Wilcox to 409 W. 4th St., Maryville.

Holt, S. W., Steffenville to Rutledge.

Hourn, George E., 4958 Fountain Ave., St. Louis, to 703 University Club Bldg.

Irwin, Charles B., 1319 Rialto Bldg., Kansas City, to 901 Shary Bldg.

Kaemmerling, Gerhard G., Joplin to 1006 W. 42d St., Los Angeles, Calif.

Krebs, F. J. V., 1906 St. Louis Ave., St. Louis, to 3212 Sullivan.

Lake, Noel E., 1204 Broadway, Kansas City, to 824 Rialto Bldg.

Meiners, Edwin P., St. Luke's Hospital, St. Louis, to 6600 Delmar Blvd.

Myers, Wilson A., Waldheim Bldg., Kansas City, to 626 Lathrop Bldg.

Parker, William G., West Eminence to 400 Landers Bldg., Springfield.

Post, L. T., 309 Union Road, Crawford, N. J., to 520 Metropolitan Bldg., St. Louis.

Sale, Llewellyn, 4463 Westminster Place, St. Louis, to University Club Bldg.

Smith, Clarence, Gallup, N. M., to Monte Vista, Colo.

Smith, James M., 426 Metropolitan Bldg., St. Louis, to 306 Humboldt Bldg.

Stauffer, William H., 201 Humboldt Bldg., St. Louis, to 822 University Club Bldg.

Wilson, Dora Greene, 626 Lathrop Bldg., Kansas City, to 1028 National Life Bldg., Chicago, Ill.

Witmer, Cassius M., Marble Hill to Santa Ana, Calif.

Wood, V. V., 301 Times Bldg., St. Louis, to 203 Humboldt Bldg.

## REINSTATED

Witmer, Cassius M., Santa Ana, Calif.

## RESIGNED

Farmer, Andrew J., Hartville.

## DROPPED

Hudson, David O., Montgomery City.

## DECEASED

Detweiler, Andrew J., Hannibal.

## CORRESPONDENCE

### RANK IN THE MEDICAL RESERVE CORPS

DR. E. J. GOODWIN,  
3517 Pine Street,  
St. Louis, Mo.

*Dear Dr. Goodwin:*—I am directed by the Surgeon-General to acknowledge the receipt of your letter of May 5, making inquiry as to the rank given to officers of the Medical Reserve Corps, and to advise you that the law governing commissions originally given in the Medical Reserve Corps permits the rank of Lieutenant, Captain and Major. The law permits promotions from these grades to the rank of Colonel.

Original commission in a grade above that of Major is prohibited by law, but promotion to that grade is allowed after the assignment to active duty. Very truly yours,

(Signed) G. I. JONES,  
Lieutenant-Colonel, M. C., U. S. Army.

[With the above communication the Surgeon-General inclosed a circular of information on this subject which is reproduced below.—Ed.]

### REAPPOINTMENT IN THE MEDICAL RESERVE CORPS

1. The department regrets very much that as officers of the Medical Department complete their duties connected with the present emergency they cannot be returned to the inactive list of the Medical Reserve Corps but in order to continue their connection with the Medical Department must be discharged and reappointed in the Reserve. It is hoped, however, that this will not prevent the building up of a large Medical Reserve Corps, including all members of the profession who have served creditably during the war.

2. The following are extracts from the law under which the Officers' Reserve Corps is organized. The information contained therein will be of assistance to officers about to be discharged and who are undecided about applying for commission in the Reserve.

National Defense Act, approved June 3, 1916, published in Bulletin 16, War Department, June 22, 1916.

## MEDICAL SECTION OF THE OFFICERS' RESERVE CORPS

SEC. 37.—The Secretary of War may in time of peace, order first lieutenants of the medical section of the Officers' Reserve Corps, with their consent, to active duty in the service of the United States, in such numbers as the public interests may require and the funds appropriated may permit, and may relieve them from such duty when their services are no longer necessary. While on such duty they shall receive the pay and allowance, including pay for periods of sickness and leaves of absence, of officers of corresponding rank and length of active service in the Regular Army.

The commissions of all officers of the Officers' Reserve Corps shall be in force for a period of five years unless sooner terminated in the discretion of the President. Such officers may be recommissioned, either in the same or higher grades, for successive periods of five years, subject to such examinations and qualifications as the President may prescribe and to the age limits prescribed therein: Provided, That officers of the Officers' Reserve Corps shall have rank therein in the various sections of said Reserve Corps according to grades and to length of service in their grades.

SEC. 38.—In time of actual or threatened hostilities the President may order officers of the Officers' Reserve Corps, subject to such subsequent physical examinations as he may prescribe, to temporary duty with the Regular Army in grades thereof which can not, for the time being, be filled by promotion, or as officers in volunteer or other organizations that may be authorized by law, or as officers at recruit rendezvous and depots, or on such other duty as the President may prescribe. While such reserve officers are on such service they shall, by virtue of their commissions as reserve officers, exercise command appropriate to their grade and rank in the organizations to which they may be assigned, and shall be entitled to the pay and allowances of the corresponding grades in the Regular Army, with increase of pay for length of active service, as allowed by law for officers of the Regular Army, from the date upon which they shall be required by the terms of their orders to obey the same: Provided, That officers so ordered to active service shall take temporary rank among themselves and in their grades in the organizations to which assigned, according to the dates placing them on active service; and they may be promoted, in accordance with such rank, to vacancies in volunteer organizations or to temporary vacancies in the Regular Army thereafter occurring in the organizations in which they shall be serving: Provided further, That officers of the Officers' Reserve Corps shall not be entitled to retirement or retired pay, and shall be entitled to pension only for disability incurred in the line of duty and while in active service.

Any officer who while holding a commission in the Officers' Reserve Corps, shall be ordered to active service by the Secretary of War shall, from the time he shall be required by the terms of his order to obey the same, be subject to the laws and regulations for the government of the Army of the United States, in so far as they are applicable to officers whose permanent retention in the military service is not contemplated.

"Act of Congress approved July 9, 1918, published in War Department, Bulletin No. 43, July 22, 1918.

"That the commissioned officers of the Medical Reserve Corps of the Regular Army, none of whom shall have rank above that of colonel, shall be proportionately distributed in the several grades as now

provided by the law for the Medical Corps of the Regular Army (p. 41):

3. When you are discharged you will be required to state on Form 150 whether or not you wish appointment in the Medical Reserve Corps. The Department trusts that you will give an affirmative answer to this question and thus contribute your support to the formation of a Reserve Corps that will put the medical profession of the United States on an organized basis in preparation for any further contingency which may confront the country.

4. The policy governing appointments in the Medical Section of the Officers' Reserve Corps, of officers who have been honorably discharged from the Medical Corps, is such as to insure that within the limitations prescribed by law every officer so appointed shall reserve rank at least equal to that held by him at the time of discharge.

M. W. IRELAND,  
Surgeon-General, U. S. Army.

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**MISCELLANY**


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**CHAPLIN PERFORMS ON CEILING FOR  
BED-RIDDEN SOLDIERS**

"Ceiling movies" are among the innovations inaugurated by the American Red Cross for the comfort, convenience and entertainment of bed-ridden soldiers.

With a specially constructed machine the Red Cross projects pictures on the ceilings, thus enabling men who are required to remain on their backs to see their favorite films without discomfort.

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**HONORABLY DISCHARGED, MEDICAL  
CORPS, U. S. ARMY**


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Altringer, A. N., Kansas City; Atherton, J. LeRoy, Springfield.

Bartlett, E. M., Clarksville; Biggs, J. B., Bowling Green; Boone, J. L., Sheldon; Bothman, L., St. Louis; Bragdon, G. H., Reeds; Bremser, H. L., St. Louis; Breuer, Wm. H., St. James; Bristow, A. S., Princeton; Brown, W. K., St. Louis; Byler, W. F., Kansas City.

Chaffin, W. F., Raymore; Clark, Edw. H., Kansas City; Clopton, M. B., St. Louis; Cowan, R. D., Ard-  
rick; Cooper, G. F., Kansas City.

Divine, D. G., Appleton City; Dixon, E. K., St. Louis; Dod, F. L., Kansas City; Donaldson, C. O., Kansas City; Downing, J. L., Lexington.

Fair, S. W., Belton; Fischel, W., St. Louis; Flury, J. A., St. Louis; Fox, S. D., St. Louis; Frakes, Eugene N., Harrisburg; Froelich, E. J., St. Louis.

Gaston, R. E., Webster Groves; Gebhart, O. C., St. Joseph; George, J. H., Kansas City; Gerstenkorn, R. E., Kansas City; Graff, J. H., Lithium.

Hahn, C. N., Dunnegan; Hall, E., St. Joseph; Harn-  
ney, L. G., St. Louis; Horrur, Geo. W., Rolla; Hox-  
sey, T. T., Affton; Hyndman, C. E., St. Louis.

Kessler, E. B., St. Joseph.

Ladd, F. H., St. Joseph; Leonard, A. C., Kansas City; Lionberger, J. R., St. Louis; Loeb, Virgil, St. Louis; Lund, H. G., St. Louis; Lutman, H. N., Ver-  
sailles; Lux, P., Kansas City; Lyman, H. W., St. Louis.

Mark, E. G., Kansas City; Martin, Clarence, St. Louis; McBeath, N. E., Jefferson Barracks; McGarry, R. A., St. Louis; McMahon, B. J., St. Louis; Monday, L. R., Richland; Morley, F. R., Sedalia; Moennighoff, F. J., Odessa; Murphy, J. C., St. Louis; Myer, M. W., Columbia.



Noll, E. A., St. Louis; North, E. P., St. Louis.

O'Connell, John, Pomeroy, Iowa; O'Kell, O. C., Excelsior Springs.

Platte, R. B., Kansas City; Platter, A. E., Memphis; Potter, W. A., Lancaster; Post, L. T., St. Louis.

Randall, Leslie, Licking; Rassieur, L., St. Louis; Reynolds, S. D., Gower; Rutherford, O. L., Bellflower.

Sale, Llewellyn, St. Louis; Schmitz, Edgar F., St. Louis; Spencer, C., Rushville; Stadler, S. A., Kansas City; Strawn, E. Y., St. Joseph.

Tate, P. S., Farmington; Thompson, W. G., Holden. Underwood, R. H., Kansas City.

Valentine, H. S., Kansas City; Veeder, B. S., St. Louis; Vosburgh, C. A., St. Louis.

Weinberg, Abraham, Kansas City; White, T. W., St. Louis; Whittaker, J. H., Kansas City; Wilson, E. H. G., Cape Girardeau; Wood, J. B., St. Louis; Wood, V. V., St. Louis; Wyatt, T. E., Kansas City.

Yeagle, R. P., Pleasant Hill.

### MEMORIAL PROFESSORSHIP TO DR. JAMES JACKSON PUTNAM, 1846-1918

It is hoped that there may be an endowment of the professorship of diseases of the nervous system in the Harvard Medical School in memory of Dr. James Jackson Putnam.

In the development of this increasingly important branch of medicine, Dr. Putnam was a pioneer in Boston and in the country at large, while he was widely recognized in Europe as a neurologist of distinction. He inaugurated the neurological clinic at the Massachusetts General Hospital in 1872, and through forty years of service was devoted to its interests, and to teaching in the Harvard Medical School. In 1893 he was appointed the first professor of diseases of the nervous system; the professorship was then, and has remained, without endowment.

It is believed that those who have known Dr. Putnam may like to join in endowing this professorship which should always bear his name, and which would fulfill his hope that neurological work of a high order might be developed at the Harvard Medical School. To all of us who knew Dr. Putnam it would also commemorate the devotion and the self-sacrificing work of his lifetime.

President Lowell sends the following letter:

HARVARD UNIVERSITY, CAMBRIDGE, Feb. 8, 1919.

*My Dear Dr. Walcott:*—The suggestion of founding a professorship of diseases of the nervous system in memory of Dr. James Jackson Putnam appeals to me deeply both on account of the value of such a professorship to the medical school, and on account of the deep affection I had for Dr. Putnam and of my reverent esteem for his character. The foundation ought to appeal strongly to all who recognize the ever increasing suffering caused to our oversensitized community by nervous ailments, and to all who knew Dr. Putnam as patient or as friend.

Yours very truly,

A. LAWRENCE LOWELL.

It is hoped that \$50,000 may be raised as endowment, of which more than half is already promised. A reply from any one who proposes to contribute is requested now, but payment, either by check or in Liberty Bonds, may be made any time before Dec. 31, 1919.

H. P. WALCOTT,  
CHARLES C. JACKSON,  
EDWARD W. EMERSON,  
EDWARD H. BRADFORD,  
MOOREFIELD STORY, *Treasurer*.

735 Exchange Building, Boston.—*Science*.

### HELP HIM FORGET

Upon the manner in which the wounded soldier spends the period of his convalescence in a military hospital may depend his entire future career. In those months directly preceding his re-entrance into the industrial world, he is likely to form a habit of mind which will manifest itself in his business life. Educators have long realized the importance of spending leisure wisely and the necessity of healthful influences for our convalescent service men is a matter involving not only the welfare of the individual, but the general interest of society, in the broadest sense of the word.

Desiring to repay, in just one more way, the nation's debt to the fighting men and at the same time to raise social standards, the Red Cross has enlisted some of the best educational minds in the country in devising an organized recreational program for the men in the government hospitals throughout the United States. In the old order of things, institutional life was a depressing environment, its hard and fast discipline breeding discontent and stifling initiative. Under the new régime, so varied are the activities provided, that every man has ample opportunity to spend his time in a manner both profitable and enjoyable with the result that discipline can be reduced to the minimum.

As the government has provided the best surgical skill and medical care for his physical welfare so the Red Cross is offering to him the most intelligent guidance for his leisure.

Dr. Albert K. Fretwell, head of the Department of Recreational Leadership of Teachers' College, Columbia University, has made a tour of the reconstruction hospitals, traveling under the joint direction of the Surgeon-General's Office and under the Bureau of Camp Service, Department of Military Relief of the Red Cross. The Surgeon-General has requested commanding officers to expedite the work by all means possible.

The Red Cross is furnishing equipment for sports and games of all sorts, facilities for music and reading, and securing trained personnel for leadership. The Red Cross recreation house attached to the hospital is in reality an up-to-date club possessing all the advantages of the establishment with a waiting membership list. There is a library including technical works as well as fiction and current magazines. Music has been encouraged, and many of the hospitals now boast an orchestra, the instruments having been furnished by the Red Cross, which has also secured professional musicians to coach the boys. All sorts of entertainments are arranged, ranging in character from the purely sociable dance to educational lectures and motion pictures. For patients who are bed-ridden, all of these entertainments are provided, in modified form or to the extent feasible and advisable. Even the movies are brought to the wards, for in some hospitals a special machine has been installed whereby pictures are thrown on the ceiling.

No recreational program which did not make ample provision for sports could be expected to kindle much enthusiasm among our vigorous, hard-fighting young men, even though they are not able to participate in them to any marked extent. The ones who cannot play at least can root. Sports are healthful to both mind and body; through them muscles and traits of character grow strong at the same time. "A good sport" carries with it more than a merely technical application; it implies clean dealing and fairness in every game of life and typifies what we like to consider the 100 per cent. American.

Therefore the Red Cross has arranged for every variety of sport in which the convalescent men can participate and acts in cooperation with the Department of Physiotherapy in order that each man, according to his therapeutic needs, may be given the

opportunity for the best physical training. For men not yet strong enough to indulge in any sport there are garden tools and seeds. Automobile rides are also provided. In hospitals where amputation cases are handled there are special games for one-armed or one-legged men, into which disabled athletes enter with all the zest of former days.

So it is that this organized recreational program does not allow a man to fall into any of the mental pitfalls which beset him after he has been drawn back out of the valley of the shadow. Often the tortures of the body have so drained the intellectual resources that a boy doubts whether the fight for life is worth the battle and if left to himself, he will let the quicksands of despondence engulf him.

Another type may make the still more pernicious mistake of thinking that because he has lost a leg or an arm or become otherwise crippled in the service of his country, that that country owes him a living, with no effort of his own. That country stands ready to give him every opportunity to take a new road in life; will stand back of him until he "makes good" and will continue his monetary compensation for life. But that country still demands and always will demand the spirit of "carry on" and the physical expression of it.

It is not easy to "carry on" when you have to do it in the dark and never again feel the glow that comes from viewing a gorgeous sunset, rolling green hills or any other of nature's beauties. With the first realization of a permanent physical handicap a mental depression is almost bound to seize the afflicted one. But the spirit will conquer and environment is the most powerful stimulus to heroic will-power.

The organized recreational program which the Red Cross has put into effect in the military hospitals throughout the United States and has lately extended to the thirty-two hospitals operated by the United States Public Health Service at the request of Surgeon-General Rupert Blue, creates healthful and stimulating environment. A man does not realize it, but he is something of a glorified kindergarten pupil. He is being given the chance to do those things he likes best in the way which will help him most in life.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1919

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Dec. 14, 1918.  
 Webster County Medical Society, Dec. 23, 1918.  
 Cedar County Medical Society, Dec. 30, 1918.  
 Pike County Medical Society, Jan. 8, 1919.  
 Vernon County Medical Society, Jan. 20, 1919.  
 Chariton County Medical Society, Jan. 25, 1919.  
 Wayne County Medical Society, Feb. 12, 1919.  
 Camden County Medical Society, Feb. 14, 1919.  
 Atchinson County Medical Society, Feb. 26, 1919.  
 Ralls County Medical Society, Feb. 27, 1919.  
 Ste. Genevieve County Medical Society, Feb. 27, 1919.  
 Nodaway County Medical Society, March 24, 1919.  
 Laclede County Medical Society, March 31, 1919.  
 Oregon County Medical Society, April 7, 1919.  
 Cass County Medical Society, April 16, 1919.  
 Adair County Medical Society, April 17, 1919.  
 Cape Girardeau County Medical Society, May 8, 1919.  
 Newton County Medical Society, May 12, 1919.

### ST. LOUIS MEDICAL SOCIETY

#### Meeting of April 19, 1919

The meeting was called to order at 8:45 p. m., by the president, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following:

Symposium on the Complications and Sequelae of the Recent Influenza Epidemic, not including Pneumonia.

"Chest Conditions," by Dr. Walter Baumgarten.

"Abdominal Conditions," by Dr. Llewellyn Sale.

"Nervous System," by Dr. Frank R. Fry.

"Ear, Nose and Throat," by Dr. W. E. Sauer.

"Eye," by Dr. William H. Luedde.

"Genito-Urinary System," by Dr. C. E. Burford.

Discussion by Drs. Edward H. Kessler, Alexander E. Horwitz, Louis C. Boislinski and E. Lee Myers.

Attendance 102.

ARTHUR GUNDLACH, M.D., Assistant Secretary.

#### Meeting of April 26, 1919

The meeting was called to order at 8:45 p. m., by the president, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

Lieut.-Col. William Coughlin presented a case of a patient with carcinoma of the thyroid gland whose sternum had been removed three and one-half years ago for "sarcoma." A metastatic tumor had been removed and the parent tumor (in the thyroid) had never been discovered.

Discussion by Drs. Benjamin M. Boulton, Eugene L. Opie and Marsh Pitzman; Dr. Coughlin closing.

The scientific program consisted of the following:

"The Relation of Wound Healing and the Resolution in Pneumonia," by Dr. M. T. Burrows.

Discussion by Drs. Eugene L. Opie and J. J. Singer; Dr. Burrows closing.

"Slight Elevations of Temperature and Their Clinical Significance," by Dr. Charles H. Neilson.

Discussion by Drs. J. Curtis Lyter and William Engelbach; Dr. Neilson closing.

The secretary announced that the vote on change of by-laws, with reference to the meeting night, resulted in 350 for Tuesday and 96 for Saturday.

Attendance 91

ALBERT F. KOETTER, M.D., Secretary.

#### Meeting of May 3, 1919

The meeting was called to order at 8:50 p. m., by the president, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

Dr. Bartlett introduced the guest of the evening, Dr. E. C. Kendall of Rochester, Minn., who addressed the society on, "The Chemical and Physiological Nature of the Thyroid Hormone."

Discussion by Drs. Martin F. Engman, Charles H. Neilson, Horace W. Soper and William Engelbach; Dr. Kendall closing.

Dr. Elsworth S. Smith moved that Dr. Kendall be elected an honorary member of the St. Louis Medical Society. Seconded and carried.

Attendance 127.

ARTHUR GUNDLACH, M.D., Assistant Secretary.



# PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Fifty-Seventh Meeting, Monday, March 10, 1919

## 1. SOME UNUSUAL ABDOMINAL FINDINGS POSSIBLY ASSOCIATED WITH INFLUENZA.

—By DR. A. O. FISHER.

Two cases recently operated on with the clinical diagnosis of appendicitis, proved to be of considerable interest. Both were young adults and had recently gone through typical attacks of influenza, of moderate severity and without complications. During their attacks they had suffered no abdominal discomfort. Within a few weeks after leaving the hospital they returned with definite abdominal symptoms very suggestive of appendicitis. In both cases there was an old history of recurrent attacks similar to these, dating back several years. Operation revealed in the first case a chronic appendix with no marked acute inflammation, hardly enough to account for the severe clinical symptoms. There was free fluid in the peritoneal cavity and an extensive inflammatory condition involving the terminal ileum, the ileocecal valve and portions of the cecum. The bowel wall was stiff, injected and friable and suggested the hyperplastic type of intestinal tuberculosis. The mesentery was thickened and the omentum adherent to the gut. No enlarged glands and no evidence of miliary tuberculosis. The second case was similar to the first, but much less extensive. Both made a satisfactory recovery after exploration and appendectomy, but the first case had a persistent temperature for some weeks, reaching normal about the third week with occasional slight elevations at irregular intervals for some time afterward. Similar conditions have been reported in association with other acute infections, but no reference has been found to any such complication after influenza. Two very similar cases have come to our attention in a personal communication. Whether these are more than coincidences it is impossible to say without further observations.

### DISCUSSION

DR. ROBINSON: I had an opportunity of seeing both of these cases clinically before operation but didn't think that they were unusual. The first case did run an unusual course during convalescence from influenza. Her fever didn't come to normal as soon as it should have. It was slightly elevated for ten days, this elevation occurring in the afternoon. The fact that she had a slight elevation of temperature after she left the hospital showed that there was something that was not being taken care of by her resistance. The fact that these two cases came so close together and both followed influenza and both were conditions not seen before, is interesting and I think it is well worth while to bring them up, but as far as I am concerned. I have nothing to throw any light on the subject.

DR. BROOKS: It is possible that this thickened condition of the intestine is the result of previous hemorrhage in the peritoneum during the acute illness.

DR. SACHS: There is another case that came in about that time, and while it is not exactly like these cases reported, nevertheless because there was no etiology for the peritoneal infection, it may belong to the same group. The patient came in with a typical history of appendicitis and had been given repeated cathartics and presented a picture of general peritonitis. He was operated upon, the diagnosis being ruptured appendix and a spreading peritonitis. There was very little fluid in the peritoneal cavity, there was an adhesive peritonitis throughout the peritoneum

but the appendix itself was not markedly diseased. The intestines were injected a good deal. I thought we were dealing with a pneumococcus peritonitis. Cultures were negative. The patient made a rapid and surprisingly uneventful recovery. It certainly did not conform to a pneumococcus peritonitis.

Whether this case would fit in with these cases of Dr. Fisher's group just reported, I don't know, but it struck us as belonging to the same series.

DR. FISHER, closing: Cultures from the fluid were negative in both cases but they were made on ordinary culture media.

In answer to Dr. Brooks' question, I might say that in the first case we did not remove a gland and in the second case, a gland was removed, but microscopic examination showed it to be negative. There was no evidence of blood in the peritoneal cavity, the fluid was clear.

## 2. COMPENSATORY HYPERTROPHY OF THE THYROID GLAND.—By DR. LEO LOEB.

1. The data concerning compensatory hypertrophy of the thyroid gland available at the present time are very contradictory. The conflicting character of the statements of different investigators is principally caused by the fact that the thyroid of dogs has hitherto been used in the large majority of investigations and the thyroid of dog is liable to spontaneous hypertrophy. In our investigations the thyroid gland of the guinea-pig has been used. No case of spontaneous hypertrophy has so far been observed in this species.

2. In order to obtain definite hypertrophy of the thyroid in guinea-pigs it is necessary to extirpate both thyroid lobes and to leave only small remnants. The hypertrophy occurs in the large majority of cases on the sixteenth or seventeenth day and in some cases even as early as between the eighth and fifteenth day. In some animals hypertrophy does not take place. Sickness of the animals is one of the causes of lack of hypertrophy.

3. Hypertrophy of the thyroid gland in the guinea-pig has a definite cycle. Two months after the operation the gland is beginning to return to the accumulation of colloid in the acini although the cells are still hypertrophic.

4. If we extirpate three-quarters of the thyroid the remaining one-fourth usually does not show marked hypertrophy, but shows the beginning of hypertrophy. In one case, however, a more marked hypertrophy was observed under those conditions.

After extirpation of one lobe the remaining lobe shows possibly traces of a beginning change. These latter changes are, however, so slight that they may lie within the limits of normal variation in the thyroid gland.

5. If we compare these data with the conflicting statements of previous investigators it becomes very probable that the conditions leading to hypertrophy of the thyroid in different species, although they differ in the kind of nourishment they take, are essentially similar, even as to quantitative factors.

6. Hypertrophy increases the mitotic activity of the thyroid cells, but only in the early stages of hypertrophy. The mitotic activity shows a definite curve which differs from that of the hypertrophy itself.

7. The conditions of hypertrophy in auto-transplanted glands are similar to those found in remnants, even in a quantitative way.

8. Contrary to the views expressed by several authors the physiological deficiency in the thyroid gland does not influence its transplantability. Glands can be auto-transplanted just as well in those cases in

which a sufficient amount of thyroid gland has been left as in other cases in which a deficiency has previously been created. The deficiency merely determines the presence or absence of hypertrophy in the graft.

9. The substances which cause hypertrophy of the thyroid gland show no individuality-specificity, hypertrophy taking place even after homoiotransplantation of the thyroid gland in cases in which a deficiency exists. But the homoiotoxins interfere with the life of the hypertrophic as well as with that of the nonhypertrophic gland. Lymphocytes and connective tissue destroy the hypertrophic gland, lymphocytes being attracted by the homoiotoxins of the hypertrophic gland as readily as by those of the nonhypertrophic gland.

It appears, however, that in addition homoiotoxins may, in certain cases, interfere directly with the production of hypertrophy.

10. In two pregnant guinea-pigs in which the thyroids were extirpated, the thyroids of the fetuses did not show hypertrophy and it was very slight in the thyroids of the mothers. In most cases early abortion takes place after extirpation of both lobes of the thyroid in guinea-pigs.

#### DISCUSSION

DR. BROOKS: How long does the transplanted thyroid function in the animal?

DR. LOEB: That varies somewhat. Sometimes in fifteen, seventeen or twenty days they are destroyed. Often they are destroyed earlier; in some cases later.

DR. IVES: There has come to my notice the title of an article to be published on skin grafting and blood grouping. This title has suggested to me that possibly blood relationships as regards agglutinins, etc., may have an application in other fields than blood transfusion; and Dr. Loeb's paper has suggested to me the possibility that these relationships may account for some of the successes and failures in tissue transplantation. It may be that incompatibilities of blood may throw some light upon incompatibilities of transplanted tissues.

DR. SACHS: I would like to ask if compensatory hypertrophy is to be recognized grossly.

DR. LOEB: No, I never diagnose it by the naked eye. I would not consider this procedure a safe one. I rely entirely upon microscopic examinations.

#### Fifty-Eighth Meeting, Monday, April 14, 1919

#### 1. REPORT OF A CASE OF PULMONARY TUBERCULOSIS AND LESION OF THE MOUTH.—By DR. LILJDAHL.

W. H. R., male, 36 years of age, married, clerk in hat store. Admitted Jan. 3, 1919, with complaint of severe headache and sore mouth.

*Family History.*—Negative, except three sisters and three brothers died in infancy, cause unknown.

*Past History.*—Pleurisy 1913; stationary weight; no night sweat; morning cough and expectoration for last three or four years.

*Present Injury.*—In 1916 after injury to mouth while eating oysters noticed swelling of lips two weeks later. Mouth never very painful. Last two months (November, 1918) began having periodic attacks of severe frontal headaches with vomiting and radiating pains down into neck.

*Physical Examination.*—Drowsy; left pupil reacts to L. and A.; media clear; fundus normal; lips swollen, dry and scaly; lesion extending back on inside of cheeks to last molar. Surface is irregular,

exuberant covered with whitish coat, a sort of stippled arrangement. Neck, slight rigidity on flexing head. Chest, long narrow costal angle, acute lagging on left, no distinct change in P. N. Breast sounds, harsh, many squeaks and râles over left. K. K. present, hyperactive, no Babinski, Kernig questionable. Laboratory: sputum showed many tuberculous and elastic tissue. Spinal fluid: pressure slightly increased, 156 cells, 137 mononuclear, 19 polynuclear. Laige's luetic reaction. Wassermann: tuberculosis complement fixation, negative. Blood: Wassermann negative, tuberculosis complement fixation 3+.

*Diagnosis.*—Tuberculosis, chronic pulmonary; tuberculosis meningitis. (?)

Lupus of moth, the question being raised of tinea or some other chronic infection.

#### 2. A DISSECTION OF THE HANDS OF TWINS.—By DR. C. H. DANFORTH.

The left hand from each of a pair of negro twin infants was removed at necropsy and subsequently dissected in the anatomical department. These hands were both polydactyl, having a small pedunculate accessory digit attached to the basal phalanx of the little finger. The family history shows numerous cases of polydactyly and of twinning.

The accessory digits were similar in the two hands. There was a single cartilaginous skeletal element which had begun to ossify distally beneath a rudimentary nail. The millimeter abductor digiti quinti and flexor digiti quinti brevis sent tendon slips into the digit but no striated muscle fibers were present. The blood supply came from the ulnar proper digital artery of the little finger and was as copious as that to the lateral half of the little finger itself. On the volar side veins followed along the artery into the deep palmar system and on the dorsal side into the dorsal venous rete of the hand. The nerve supply to the volar side consisted of two relatively large branches from the common digital and on the dorsal side a small cutaneous nerve. Sense organs, especially lamellar corpuscles, were well developed. Skin and sweat glands were normal.

The rest of each hand was dissected in order to see what degree of resemblance might be expected in the anatomy of twins. The left hand of a normal white infant was used as a control and parallel dissections of the three specimens made. A number of points in which all three hands were similar to each other, but different from the normal adult condition suggest that some important changes in anatomical relationships may take place between birth and maturity.

A detailed comparison showed that variations of different degrees occurred in all but the skeletal system, and that in most instances the twins tended to vary in the same direction. Out of 45 points in which the three hands were not alike the twins were in agreement in 35 points while each twin differed from the other twin and agreed with the control in 5 points. Some, but probably not many of these resemblances and differences may be due to racial factors. Subtracting an arbitrary 50 per cent. for these possible factors the hands of the twins still resemble each other three or four times as much as either one resemble the control. It would therefore seem that heredity is probably the most important factor in the variations of most of the systems studied in these dissections.

#### DISCUSSION

DR. TERRY: These observations are valuable in adding to our knowledge of variation, a subject of fundamental importance. Complete records of parts presenting a variation, of which Dr. Danforth has



given us a good example tonight, though needed by every worker in the subject, are rare in the literature.

I am interested particularly in this case because the specimens being immature, the question is presented as to whether certain of the variations described are not really normal and represent stages in normal development. For example, the presence of two synovial sheaths for flexor tendons, superimposed: it is possible that this condition is normal in the negro infant.

It is interesting also to find that the additional finger, although possessing but a single skeleton element, gives considerable evidence of structure characteristic of the regions of the distal and proximal phalanges; nail and absence of hair, termination of extra tendons of the intrinsic hand muscles. In other words, the extra digit is not a mere appendage composed of tissues arranged in no order, but an organ repeating a well established organ of the body and connected with the body in such way as might offer some slight degree of use.

### 3. WAR NEUROSES AS A PHYSIOLOGICAL CONSERVATION.—By DR. SIDNEY I. SCHWAB.

The original of this paper was published in the May number of the *Archives of Neurology and Psychiatry*.

This paper has to do with the organization of the neuropsychiatric division of the A. E. F. as far as it concerned itself with the war neuroses, and also with a point of view developed by this division towards the problem presented by the war neuroses.

The war neuroses presented both a military and medical problem to each of the allied armies and each army attempted a solution of the problem. The A. E. F. was different from all the allied armies in that it was the only considerable body of troops so far removed from its base that transportation to home hospitals was absolutely out of the question. Therefore, these cases had to be treated at or near the actual zone of fighting. The American point of view therefore depended on the unique situation of the American forces which made it necessary to solve the question of the war neuroses in France; the recognition of the war neuroses as a disease entity; a realization of its mechanism and defense, and a definite neurological organization to care for such cases.

The neuropsychiatric organization consisted of a special hospital for war neuroses, which was established within what was at first supposed to be ambulance convoy of the lines; that is, within 20 or 25 miles from the front; a divisional psychiatrist attached to divisions in the front area; forward neurological hospitals, and possibly, if the war had lasted longer, a mobile neurological unit.

The plan contemplated the treatment of the war neuroses by such methods as had been found useful in home areas. The theory was that in the A. E. F. the soldier with the war neuroses should be treated within the zone of active warfare just as he would have been had he been sent back to the United States.

A description of the forward area hospitals as well as Base Hospital 117, the special hospital for war neuroses located at La Fouché in the foothills of the Vosges Mountains, is then given.

War neurosis was then defined as a reaction of the nervous system to the trauma of war as a result of physiological adaptation and not as a result of organic changes in the nervous system. War neuroses may be defined therefore as an elaboration of the instinct of self-preservation carried out without the individual's will or knowledge. They are defensive automatic adaptations because the individual has no longer

the power of adapting himself to meet conditions and surrenders himself to the more powerful defenses than he himself can consciously construct. The physiological adaptations due to the setting into activity of these primitive organic defense system are shown by groups of abnormal reactions of the whole nervous system. As these symptoms become grouped, typed and fixed they show the clinical pictures of disease to which the term war neuroses or shell shock has been given.

The following classification was adopted at Base Hospital 117:

- |                           |                 |
|---------------------------|-----------------|
| 1. Neurasthenia.          | 9. Exhaustion.  |
| 2. Psychothemia.          | 10. Gas         |
| 3. Hypochondriasis.       | (a) Syndrome.   |
| 4. Hysteria.              | (b) Neurosis.   |
| 5. Anxiety neurosis.      | 11. Concussion. |
| 6. Effort syndrome.       | (a) Syndrome.   |
| 7. Anticipation neurosis. | (b) Neurosis.   |
| 8. Timorousness.          |                 |

The predetermining factors are the nervous constitution of the individual as affected by inheritance or disease (this is not very important), fatigue, sleeplessness, lack of food and drink, worry, and other factors of a like nature. The immediate factor is the traumatic instance of a mechanical nature, such as the explosion of a shell or an intense emotional experience. As a result of this the soldier is temporarily dazed, confused, or rendered unconscious. During this state normal inhibition is removed and the soldier reacts to the primitive instinct of self-preservation, which by the process of elaboration, and fixation of the immediate symptoms produced by the shock cause the various types of war neuroses.

An analysis of the mechanism as expressed in symptoms was then touched upon and the methods of treatment in vogue at Base Hospital 117 and at the forward areas was described.

An estimate of the success of the organization of the base hospital was given as based upon the steady decrease in the number of cases of war neuroses which was sent to the base hospital and the decreasing percentage which were sent home as incurable. As a result of the neuropsychiatric organization war neuroses ceased to be an important medical and military problem in the A. E. F.

The following conclusions were then given:

1. The organization and development of the Neuropsychiatric Department of the A. E. F. led to the formulation of a characteristic point of view in regard to the war neuroses. This point of view had a definite influence upon the entire medical and military personnel in contact with the soldier suffering from the war neurosis.

2. The war neuroses are clinical entities with clinical expressions of a sufficiently definite kind to warrant type classification.

3. The varying clinical picture is due not so much to the kind of thing that happens or to the effect of what has happened but to the reaction of the individual in the process of adjustment to the things that have happened to him.

4. The war neuroses are the products of definitely working sets of mechanisms, physiologically activated which show themselves by means of psychogenic adaptations.

5. The war neuroses are protective or defensive elaborations of the primary instinct of self-preservation in the face of destructive incidents of war.

6. For their production a certain degree of lessened normal inhibition is necessary. This is most easily produced through the effect of shell explosion by which a brief or longer period of unconsciousness, stupor or confusion results.

7. It is in this period that by the process of fixation the initial symptoms are manifested. These often are automatic repetitions of reflex defensive manoeuvres.

8. The degree of lessened inhibition may be produced by a trauma which acts for the most part emotionally.

9. In the earlier phases of the development of a war neurosis volition has no place, later at the period of convalescent conflict a varying degree of volition and wish may be present.

10. Exhaustion, fatigue, sleeplessness, responsibility, hunger and thirst are important indirect factors in preparing the soil for the development of a war neurosis. The immediate factor is some sudden or unusual trauma endowed with an intense degree of emotion.

11. War neuroses are not the result primarily of an organic change in the essential structure of the nervous system. They do not develop in the presence of serious lesions of the brain and they are not necessary to the individual in the presence of severe wounds.

No paper on the war neuroses should be completed without directing attention to the possibility and necessity of striving in every way to translate into the problems presented by civilian neuroses the knowledge, insight and experience gained in the war.

If this is not done the war neuroses are no more than an evanescent item in the casualty lists. The war neuroses are specific war born conditions and with the ending of the war they disappear from clinical experience. Their place is taken by the civilian neuroses which are different things.

What remains are the mechanisms and therapeutic methods. These are the unchanging elements and understanding them is the permanent gain. All that is necessary is to replace the conflict of battle by the conflict which results from social and economic stresses, to substitute less fundamental instincts for that of self-preservation and to cultivate in treatment the same therapeutic eagerness, definiteness and incisiveness which were found effective there.

If this is done the "return to duty" cases in the civilian neuroses will reach and pass beyond that which was possible among the soldiers treated in the various divisions of the neuropsychiatric organization of the A. E. F.

If it has been possible in this paper to suggest something of the opportunity for study which this material furnished, something of the spirit with which the problem of the war neuroses was approached and something of the promise which should result from experiences of this kind to the future of American Neurology its purpose has been largely fulfilled.

#### DISCUSSION

DR. ROBINSON: In the presence of so many neurologists, I hardly feel that I should speak on the subject of neurosis. On the other hand, I think there are some points which are of very wide interest in Dr. Schwab's paper. There is a trend of thought and attitude of mind that runs through this paper that should be of interest and use to every man dealing with sick people, no matter what his specialty and no matter what type of patients he has to deal with. Dr. Schwab has brought out the importance of the conflict of self-preservation that goes on continuously within all persons.

There are two points that have impressed themselves upon me particularly. One is the question of acute and chronic types. Dr. Schwab has brought out the fact that the war neuroses in the A. E. F. have been

treated just as early as possible and a great effort has been made to see these cases as soon after the development of the neurosis as possible. If they are not treated as early as possible, these symptoms become more and more fixed and the difficulty of relieving them becomes greater. That is a point that is applicable in civilian medicine. Where there are neuroses there should be an effort to cure them, to dispel them, at as early a period as possible, before the symptoms become firmly fixed.

Secondly, I am very much interested to see the so-called effort-syndrome in Dr. Schwab's classifications. The effort syndrome has been particularly interesting to those of us who have followed the history of the medical developments of the war. The effort syndrome is characterized by palpitation of the heart, shortness of breath, dizziness and other symptoms which center about the heart. The condition has been very extensively studied by cardiac specialists in all countries at war. The effort syndrome has been considered by some as a thyroid intoxication, by others an infection, an acidosis and by some a disturbance of the nervous controlling mechanism of the heart. I was interested a few weeks ago to hear a man say who had studied the condition extensively and carefully, that he had reached the conclusion that it was a subconscious defensive mechanism. I think it is very interesting indeed that this condition, effort syndrome, which has created so much discussion, has after all come back to be included in the important group of war neurosis, without relation to circulatory changes as primary.

DR. FRY: The sense of fatigue in muscles is often an inhibiting feature in effort syndrome cases. It sometimes gives us the cue to other symptoms which develop later and are included later in this group. Some patients have some of these minor features for a long time before palpitation or a condition of some kind about the chest or epigastrium has developed. From this standpoint these are interesting cases to study.

I listened to Dr. Schwab's valuable talk with interest. It helps to a better understanding of reports from other sources. The neuroses of the war considered in this careful technical manner will be of great educational value to the profession and the laity as well.

DR. SCHAEFFER: I should like to bear testimony to the work Dr. Schwab did at La Fouché, because I was in his hospital on several occasions not as a patient, although possibly I may have been classified under No. 8 or No. 9, depending upon which direction I was going at the time. Dr. Schwab has spoken very appreciatively of the work of Colonel Salmon, who was chief, although it was my impression that Dr. Schwab gave no understanding of the degree to which his own efforts contributed to the great success of this work. I was very much pleased to hear of this work in many places, and always with the greatest appreciation.

You will remember Dr. Schwab described the conditions at La Fouché and compared them with the advanced neurological hospital. I confess that a visitor to his hospital got a different impression, although the staff were keenly interested and were working very hard at their problems, there was no evidence of the gloom and other seriousness and absence of any amusement or diversion which his description led one to believe. I remember several very delightful experiences during my brief visits at the hospital.

DR. OPIE: I do not feel qualified to discuss the subject of war neurosis, but no one could have been associated with Dr. Schwab as closely as I and fail to develop an intense interest in it. Under the



trying conditions existing in a base hospital in the field, he has laid the foundation of this study which has proved of far-reaching value to the army.

I wish to ask Dr. Schwab if these neuroses have been much more frequent in this war than in other wars? Has their occurrence been influenced by the peculiar character of recent warfare? Were they more frequent with trench warfare than in the latter period when fighting became more mobile? These questions may be of great importance in future wars.

DR. SCHWAB, closing: In answer to Dr. Opie's question concerning the impossibility of future wars if the war neuroses should increase in relation to the intensity of modern explosives it is quite possible that this may be so. I was interested enough in this notion while working at Rouen to make a study of this possibility. Theoretically if the use of high explosives and gas should increase proportionately in the next war as it did in this and if the defense of the individual soldier should not parallel this it is not at all unlikely that offensive warfare from the standpoint of mobile activity may be seriously threatened, and if this is so war in our present sense might be an impracticable thing.

In regard to the difference in percentage of war neuroses in open and trench warfare, it is true that in the first two years of the war there was a larger percentage of war neuroses than in the final months of the war. The immobility of the soldier in trench warfare leads to the grouping of men in small units and the force of a shell explosion has a more direct effect in regard to the number of men blown up than would be the case if the fighting was open. In addition in trench warfare burial experiences are not unusual, whereas in open warfare they are less frequent. The number of burial experiences associated with explosions by which the soldier was covered with debris and portions of trench supports, etc., in the American army was slight, therefore the extraordinary anesthetic cases that were found among the British was not discovered in the A. E. F. As the warfare grew open, especially in the Argonne fighting during May and June, the war neuroses not only became less in number but were more easily treated.

#### BATES COUNTY MEDICAL SOCIETY

A meeting of the Bates County Medical Society was held in the Court House at Butler, April 24, 1919, Dr. Todd calling the meeting to order, with nine members present.

Dr. Thomas F. Lockwood read a paper on hysteria which was enjoyed by all present, followed by Dr. N. I. Stebbins, who gave a lecture on surgical gynecology in a masterly way, which held the attention of all.

G. W. BERRY, M.D., Secretary.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at the Commerce Club rooms, Wednesday evening, April 16, 1919, with the president, Dr. A. B. McGlothlan, in the chair and twenty-one members present. The minutes of the previous meeting were read and approved.

The following applications received their first reading and were referred to the board of censors for their investigation and report: Drs. L. J. Ferguson and Elmer Chipp Ambrose.

The application of Dr. Joseph K. Chipp by transfer from the Harrison County Medical Society was read and the doctor was duly elected to membership.

The secretary was instructed to send a telegram to

Senator T. J. Lysaght expressing the unanimous report of our society to Senate Bills Nos. 675 and 676 which had reference to amending the laws governing the state board of health.

The committee which had charge of bulletining the daily operations, clinics, and special cases at the hospitals, made their report through Dr. Stevenson, the chairman, and they were authorized to proceed with printing the announcements and complete all other necessary arrangements.

A motion carried that the chairman appoint a committee of five or more to confer with Mayor Whitsell at an early date and urge upon him the importance of having Dr. Daniel Morton reappointed a member of the social welfare board of St. Joseph. Thereupon the following committee was named: Drs. J. F. Owens, C. R. Woodson, Floyd Spencer, P. I. Leonard, W. H. Minton, L. J. Dandurant, B. W. Toothaker.

The scientific program of the evening consisted of the following:

"Diagnosis of Urinary Calculi," by Dr. J. J. Bansch.

Discussed by Drs. H. J. Ravold, Caryl Potter, A. B. McGlothlan.

"Focal Infections," by Dr. P. I. Leonard.

Discussed by Drs. William L. Kenney, L. J. Dandurant, Caryl Potter and A. B. McGlothlan.

There being no further business before the society the meeting adjourned.

#### Meeting of May 7, 1919

The regular meeting of the Buchanan County Medical Society was held at the Commerce Club rooms, Wednesday evening, May 7, the president, Dr. A. B. McGlothlan, in the chair. The minutes of the previous meeting were read and approved.

The following applications for membership having been approved by the board of censors received their second reading and were duly elected to membership: Dr. Elmer C. Ambrose, St. Joseph; Dr. L. J. Ferguson, St. Joseph.

Dr. Stevenson, chairman of the committee on clinics, was instructed to advise the Physicians and Nurses Exchange to bulletin all doctors operating at the hospitals whether or not they are members of the society, provided they are ethical so far as the requirements of our society demands.

The program of the evening was concluded with the exhibition of the following films: "The Surgical Treatment of Abnormal Mouths" and "Technic of Obstetrics, Normal and Abnormal."

W. F. GOETZE, M.D., Secretary.

#### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, April 10, at 1:30 p. m. The following members were present: Drs. A. R. Elder, president; H. S. Crawford, secretary; C. S. Dodd, M. P. Overholser, R. D. Ramey and J. S. Triplett.

A very interesting program was carried out as follows:

"Drains and Drainage," by Dr. J. S. Triplett. This was an exceedingly interesting and practical paper, and was followed by a very interesting discussion.

Symposium, "Influenza": "Symptoms," C. S. Dodd, M.D.; "Treatment," R. D. Ramey, M.D.; "Complications," M. P. Overholser, M.D.; "History of the Disease and Methods of Handling in Military Camps," H. S. Crawford, M.D. This subject was well discussed by all present and many excellent and practical ideas were brought out.

Dr. R. D. Ramey next presented a very interesting clinic, and every one present had an opportunity to examine an unusual case of great interest to the members of the county society.

It was regrettable that so few of the members of the society were able to be present, as those who were on the program went to the trouble of preparing their papers and were disappointed at the small attendance. The officers hope to see more interest taken in the future meetings and expect to have an excellent program at the next meeting, which will be June 12.

H. S. CRAWFORD, M.D., Secretary.

#### DUNKLIN COUNTY MEDICAL SOCIETY

The Dunklin County Medical Society met in the Star Theater in Kennett, on Tuesday, 8 p. m., May 7, 1919. There were present eleven home doctors as follows: L. J. Matlock, president; Paul Baldwin, vice president; T. J. Rigdon, secretary-treasurer; P. L. Tipton, E. G. Cope, R. E. Martin, W. L. Gossage, Lieut. J. C. McKay, J. J. Drace, C. C. Drace, Eli Back and Smith. Drs. Theodore Robb, former mayor of Kennett, and W. F. Gerhardt, local dentists, and Dr. J. A. Warner of St. Louis were in attendance by invitation. After reading and approving of the minutes of the last meeting the following program followed:

Lieut. Dr. J. C. McKay, who was on a visit home from overseas duty in the Medical Reserve Corps, together with his young French bride, being present was called on and gave us a very interesting discussion on the work of the doctor in war service on the battlefield in France. Dr. McKay told the society how severely some of the men were wounded and how promptly the hospital service cared for them, the methods used to treat them, and the small per cent. of fatalities. This was enjoyed by all present.

The next was a paper on acidosis by Dr. Paul L. Tipton and dealt with the various pathological conditions of the body due to some form of acidosis, and pointed out the necessary importance of cleanliness in eating, dressing and living in general. The paper was a very good one and was enjoyed by all.

Then came a very interesting lecture by Dr. J. A. Warner of St. Louis. This lecture bore especially on the treatment and prevention of such bacterial diseases as influenza and pneumonia, and more especially for the prevention of the latter as a sequella of influenza. Dr. Warner also showed how remedies were made and thoroughly tested before being placed on the market or in the hands of the doctors for use in treating their patients.

After the program was finished, Dr. T. J. Rigdon, the secretary of the society, took all present to the parlor of the East Side Pharmacy where he had prepared some delightful refreshments of strawberries, cream and cake, ice cream and cigars. This was a very happy climax to an evening spent in a way that was not only beneficial to those present but to the great number of sick people who depend on us for medical aid and treatment when sick. All in all it was a very delightful occasion and will not be forgotten soon.

T. J. RIGDON, M.D., Secretary.

#### LINN COUNTY MEDICAL SOCIETY

The Linn County Medical Society met in regular session Tuesday evening May 13, 1919, in Brookfield, at Dr. Robert Haley's office. While there were only eight of us present we enjoyed a very pleasant and profitable session.

The first number on the program was a paper on typhoid fever by Dr. H. H. Pratt of Brookfield, but he was not present and did not send his paper.

The next number on the program was a paper on "Ectopic Gestation," by Dr. Edward Standley of Brookfield, who gave us a very excellent paper which was discussed with no little interest.

The next number was a "Symposium" on post-operative hernia, observations as to causes of and report of cases. The discussion was opened by Dr. Ola Putman of Marceline, who gave a very lucid description of causes and methods of prevention of the same. Dr. F. W. Burke of Laclede and Dr. J. L. Cantwell of Bucklin followed in the discussion and brought out some very excellent points.

Dr. Ola Putman then gave a case report of a case of "Encephalitis Lethargica," which was listened to with great interest, so much so that the society requested the secretary to send Dr. Putman's paper to the State Association Secretary to be published in the JOURNAL. The society then adjourned until its next regular meeting.

P. L. PATRICK, M.D., Secretary.

#### MARION COUNTY MEDICAL SOCIETY

On April 4, 1919, the regular meeting of Marion County Medical Society was held in Dr. Hornback's office at 8 p. m. Those present were: Drs. Bourn, president; Goodier, Hornback, Chilton, Howell, Hill, Baskett, and Ross. The minutes of the previous meeting were read and approved.

Dr. Goodier read a paper on "Heredity," which was discussed by those present.

Dr. Ross reported a case of uterine hemorrhage in the mother of a three weeks old baby, following the taking of a patent medicine to break up a cold.

MARY S. ROSS, M.D., Secretary.

#### PIKE COUNTY MEDICAL SOCIETY

Pike County Medical Society met in regular session at Clarksville, Mo., April 7. The president, Dr. T. Guy Hetherlin, called the meeting to order.

The following members were present: Drs. C. L. Bankhead, J. E. Bankhead, Dan Fortune, T. Guy Hetherlin, O. K. Edgell. Dr. James B. Biggs of Bowling Green, who recently returned from France, was a visitor.

The society condemned two bills before the general assembly known as House Bill 909 and House Bill 905.

Motion was made and carried to prosecute all chiropractors in general and one Sisson in particular, charged with practicing medicine illegally in this county.

The application of Dr. James B. Biggs of Bowling Green was received for admission into the society.

The following committees were appointed by the president: Board of Censors, J. E. Bankhead, 1919-1922; O. K. Edgell, 1919-1921; F. V. Keeling, 1919-1920. Committee on Public Health and Legislation, J. E. Bankhead, W. R. Hardin, O. K. Edgell.

There being no further business the society adjourned to meet at Bowling Green, May 5, 1919.

DANIEL FORTUNE, M.D., Secretary.

#### PLATTE COUNTY MEDICAL SOCIETY

The Platte County Medical Society met in call meeting in Platte City, April 23, with Dr. A. S. Herndon, president, in the chair; those present being Drs. Herndon, Redman, Clark, Murray and Durham.

This being our first meeting since October we elected the following officers for 1919: President, Dr. A. S. Herndon of Camden Point; vice president, Dr. Wilson Murray of Platte City; secretary-treasurer, Dr. S. L. Durham of Dearborn.

There being no further business the meeting adjourned.

S. L. DURHAM, M.D., Secretary.



### ST. FRANCOIS COUNTY MEDICAL SOCIETY

The society was called to order by the president, Dr. Topping, in the office of Drs. Keith and Topping, at 8 p. m., April 8, 1919. Members present were: Drs. Topping, Evans, Appleberry, Lester, Whiteside, English and Cecil.

There being no program the election of officers ensued with the following results: President, Dr. F. L. Keith of Flat River; vice president, Dr. R. Appleberry of Bonne Terre; secretary-treasurer, Dr. G. E. Cecil of Flat River; delegate to the state medical association, Dr. Cecil, with Dr. J. H. English of Flat River as alternate.

There being no further business the society adjourned to meet sine die.

G. E. CECIL, M.D., Secretary.

### ST. LOUIS COUNTY MEDICAL SOCIETY

In the absence of the president and vice president the society was called to order by the secretary, Dr. A. Conway, at 3:20 p. m.

Those present were Drs. W. H. Townsend, C. A. P. Dunnavant, A. F. Meisch, G. C. Eggers, J. H. Armstrong, F. Sandfos, A. Conway, H. N. Corley, G. Jones, P. M. Brossard, S. H. Reynolds.

Upon motion Dr. W. H. Townsend was elected temporary chairman.

It being reported that our fellow-member, Dr. R. D. Moore, is sick and a patient in U. S. Hospital in Denver and that he has recently suffered a bereavement in the loss of a child, a resolution was passed tendering him the sympathy of the society and expressing the hope of his speedy recovery.

A resolution was passed to the effect that the war being over and most of the physicians who had entered U. S. service being or about to be discharged, the society does not feel it incumbent upon it to longer pay their dues and the secretary was instructed to write a notification to each one to that effect.

Dr. J. H. Armstrong exhibiting a large calculus recently removed from the kidney of a patient and following the presentation he gave a talk on the uses of the Dakin solution in the army service and the method of its preparation and its use.

A. CONWAY, M.D., Secretary.

### VERNON COUNTY MEDICAL SOCIETY

The Vernon County Medical Society met in Nevada, Mo., Thursday, April 10, 1919. The meeting proved to be one of the best in the history of the society.

A number of obscure cases were examined by the visiting specialists at the morning session at The Nevada Hospital. The afternoon session at the Courthouse was equally interesting. The lectures by Dr. Wilson A. Myers of Kansas City on nonspecific therapy and diabetes, and Dr. H. E. Pearse of Kansas City on fibroid tumor, were worth going many miles to hear.

Those present were: Drs. Pearse and Myers of Kansas City; Dr. N. I. Stebbins, Clinton; Dr. W. Cline and Dr. R. J. Smith, Appleton City; Dr. W. H. Popplewell, Sheldon; Dr. T. D. Combs, Bronaugh; Dr. G. S. Walker, Harwood; Dr. E. H. Liston, Walker; Dr. C. W. Musser, Metz; Dr. G. Schaff, Moundville; Drs. Davis and Schlicht, State Hospital; Drs. I. W. Amerman, W. T. Bohannon, Q. M. Brown, T. B. Craig, L. H. Callaway, E. A. Dulin, T. Mc-Lemore, J. M. Yater, J. F. Robinson, G. C. Willson, J. T. Hornback of Nevada.

A number of nurses from the State Hospital and Vernon Hospital were present.

The next medical meeting in Nevada will be the tri-county meeting some time in June.

J. T. HORNBACK, M.D., Secretary.

### WAYNE COUNTY MEDICAL SOCIETY

The Wayne County Medical Society met in Williamsville with Dr. J. L. McGhee presiding. Other members present were J. P. Sebastian, J. P. Price and R. J. Owens. The minutes of the previous meeting were read and approved.

Some communications from the secretary of the State Medical Association, Dr. E. J. Goodwin, were read regarding medical legislation and children's code, but as the legislature is drawing to a close and the members present had confidence in our representatives, Dr. C. N. Jones and Senator O. S. Harrison, to do the right thing in this matter, no action was taken.

Dr. R. J. Owens was elected delegate and Dr. J. P. Sebastian alternate to the state convention which meets at Excelsior Springs May 26-28.

Some interesting discussions on various topics were enjoyed.

The meeting adjourned to meet in Greenville, Tuesday, June 3, 1919.

R. J. OWENS, M.D., Secretary.

### WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met at Hartville on May 1, 1919, in the parlor of the Archer Hotel, Dr. R. A. Ryan, president, in the chair, and the following members present: Drs. B. E. Latimer, R. M. Norman, J. D. Ferguson, A. C. Ames, R. M. Rogers and J. A. Fuson.

Dr. B. E. Latimer of Hartville read a very interesting paper on scarlet fever. Many points of interest were brought out and discussed by all present.

After this paper Dr. R. M. Rogers delivered a very able lecture on medical ethics. This was much enjoyed, by all present. The doctor certainly handled his subject without gloves and in a very able manner.

The society adjourned to meet in Ava on the first Thursday in August, 1919.

J. A. FUSON, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1919, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**ANTI-ANTHRAX SERUM-LEDERLE.**—Marketed in packages containing one 50-Cc. syringe with bulb and sterile needle. For a description of anti-anthrax serum, see New and Nonofficial Remedies, 1919, p. 269. Schieffelin and Company, New York.

**ANTIDYSENTERIC SERUM (POLYVALENT)-LEDERLE.**—Prepared from horses immunized against the Shiga, Kruse, Flexner and Hiss types of dysentery bacilli. Marketed in syringes containing 10 Cc. each with sterile needle. For a description of antidysenteric serum, see New and Nonofficial Remedies, 1919, p. 269. Schieffelin and Company, New York.

**TUBERCULIN VON PIRQUET TEST ("T. O.")-LEDERLE.**—Old tuberculin marketed in packages containing three collapsible wax tubes and three scarifiers.

**TUBERCULIN SUBCUTANEOUS TEST ("T. O.")-LEDERLE.**—Marketed in vials containing 1 Cc. For a description of Old Tuberculin, see New and Nonofficial Remedies, 1919, p. 277.

**TUBERCULIN "B. E." (BACILLUS EMULSION)-LEDERLE.**—Marketed in vials containing 1 Cc. For a description of New Tuberculin, see New and Nonofficial Remedies, 1919, p. 280. Schieffelin and Company, New York.

**TUBERCULIN "B. F." (BOUILLON FILTRATE)-LEDERLE.**—Marketed in vials containing 1 Cc. For a description of Tuberculin Denys, see New and Nonofficial Remedies, 1919, p. 280. Schieffelin and Company, New York.

**STREPTOCOCCUS VACCINE, POLYVALENT-LEDERLE.**—A streptococcus vaccine marketed in 5-Cc. vials containing, respectively, 50, 100, 200, 400 and 800 million killed streptococci. For a description of Streptococcus Vaccine, see New and Nonofficial Remedies, 1919, p. 291. Schieffelin and Company, New York.

**PARATYPHOID VACCINE-LEDERLE.**—Marketed in packages of three 1-Cc. vials, one vial containing 250 million each of paratyphoid bacilli A and B, while each of the other vials contains 500 million each of paratyphoid bacilli A and B. For a description of Typhoid Vaccine, see New and Nonofficial Remedies, 1919, p. 292. Schieffelin and Company, New York.

**SCHICK TEST-LEDERLE.**—A diphtheria immunity test marketed in vials containing diphtheria toxin sufficient for ten tests, accompanied by the required amount of sterile diluent to make the proper dilution of the toxin. For a description of the Diphtheria Immunity Test (Schick Test), see New and Nonofficial Remedies, 1919, p. 305. Schieffelin and Company, New York (*Jour. A. M. A.*, April 19, 1919, p. 1136).

**DIPHTHERIA TOXIN-ANTITOXIN MIXTURE.**—A far more durable immunity against diphtheria can be established with a mixture of diphtheria toxin and antitoxin than with antitoxin alone. The immunity does not appear until a considerable period of time has elapsed, and hence the mixture is not applicable in an outbreak of disease. In general the overneutralized mixture is preferred. Several doses are usually required to induce immunity. Only those persons who are positive to the Schick test need be immunized, and the progress of the immunization may be determined by the response to this test.

**DIPHTHERIA TOXIN-ANTITOXIN MIXTURE-LEDERLE.**—A mixture consisting of five L + doses of toxin and 6.25 units of antitoxin. Marketed in vials containing one dose. Three doses are packed in a carton. Schieffelin and Company, New York.

**MERCURIALIZED SERUM.**—A solution of mercuric chloride in normal horse serum diluted with physiological sodium chloride solution. Mercurialized serum is proposed for the treatment of syphilis, particularly the cerebrospinal type. It can be used intraspinally and intravenously.

**MERCURIALIZED SERUM-LEDERLE.**—A brand of mercurialized serum complying with the New and Nonofficial Remedies description. It is marketed as Mercurialized Serum-Lederle, Dilution No. 1 containing mercuric chloride 0.0013 Gm. in 30 Cc. and Mercurialized Serum-Lederle, Dilution No. 2 containing mercuric chloride 0.0026 Gm. in 30 Cc. Each is accompanied with an equipment for intraspinal administration. Schieffelin and Company, New York (*Jour. A. M. A.*, April 26, 1919, p. 1225).

## PROPAGANDA FOR REFORM

**DICHLORAMINE-T AND PETROLATUM DRESSING FOR BURNS.**—Torald Sollmann reports that solutions of dichloramine-T in chlorocane do not protect the large open surfaces of burns against mechanical irritation and access of air. On the contrary, the solution is absorbed by the dressing, which is then glued by the wound secretions and causes pain and injury when the dressing is changed. As a result of a study of the decomposition of dichloramine-T by different solvents, Sollmann proposes the use of an ointment of three parts of surgical paraffin and seven parts of liquid petrolatum as a protective dressing on wounds (burns) treated with dichloramine-T-chlorocane solution. It may even be used as a basis for a dichloramine-T ointment (*Jour. A. M. A.*, April 5, 1919, p. 992).

**STEVENS' CONSUMPTION CURE.**—C. H. Stevens, a discredited London quack, has been attempting to exploit Canadian veterans at the Mountain Sanatorium for the treatment of pulmonary tuberculosis at Hamilton, Ont. The nostrum was claimed to contain "Umckaloabo root" and "Chijitse," but the analysis made for the British Medical Association showed it to contain no active drugs except alcohol and glycerin. The following is a brief history of this "cure": In 1904 Stevens was selling "Sacco" in Capetown, South Africa, but got into the courts and found it expedient to leave Capetown. In 1906, Stevens was in Johannesburg trading as the "South African Institute of Medicine" and selling his stuff as "Lungsava"; was twice convicted of violating the law and left for England. In 1907, Stevens was in London selling his "cure," and in 1910 was declared by the courts to be guilty of intentional fraud and his "cure" pronounced a quack remedy. In 1915, Stevens' "cure" appeared in the United States under the name of "U. C. Extract," exploited by the Umckaloabo Chemical Company of New York City. Today, Stevens is attempting to exploit tuberculous Canadian soldiers who have acquired the disease in the service of their country (*Jour. A. M. A.*, April 5, 1919, p. 1018).

**SURGICAL SOLUTION OF CHLORINATED SODA (DAKIN'S SOLUTION).**—According to New and Nonofficial Remedies, 1919, surgical solution of chlorinated soda may be prepared: 1. By the electrolysis of a sodium chlorid solution. 2. By the action of chlorine on sodium carbonate. 3. By the interaction of chlorinated lime and sodium carbonate solutions with subsequent treatment with either boric acid or sodium bicarbonate to reduce the alkalinity (*Jour. A. M. A.*, April 5, 1919, p. 1021).

**PROCAIN ANESTHESIA.**—There is no evidence of latent injury to the dental nerves from repeated injections of procain to control supersensitiveness of the teeth. If an isotonic solution is used and this solution made sterile by boiling, it is not probable that it will be injurious (*Jour. A. M. A.*, April 8, 1919, p. 1022).

**PAW PAW TONIC.**—An advertisement declares that "Paw Paw Tonic" contains no alcohol, but admits that it contains port wine. A newspaper item details the conviction of a Charlotte, N. C., druggist for selling this tonic to young men who became drunk from drinking it. The counsel for the druggist maintained that if Paw Paw Tonic was taken according to directions, the medicine would not produce intoxication. The jury decided that a "patent medicine" which when taken in liberal quantities will produce intoxication, is an intoxicating liquor (*Jour. A. M. A.*, April 12, 1919, p. 1079).

**PROFLAVIN OLEATE.**—This is stated to be the oleic acid salt of the base contained in proflavin (the soluble sulphate of 3,6-diamino acridine). Proflavin oleate is not obtainable in the United States. Pro-



flavin has been proposed in England for use as a wound antiseptic, but its usefulness has been seriously questioned (*Jour. A. M. A.*, April 12, 1919, p. 1099).

**BUTTERMILK THERAPY.**—For reliable information with regard to new therapeutic measures and reliable brands of drugs proposed for them, New and Non-official Remedies should be consulted. This book contains a chapter which discusses the probable value of the Metchnikoff sour milk therapy. The book also describes those brands of preparations which the Council on Pharmacy and Chemistry found to be reliable and exploited decently (*Jour. A. M. A.*, April 12, 1919, p. 1099).

**THE ADVERTISING OF SAL HEPATICA.**—There are two ways of advertising a "patent medicine"—by direct advertisement to the public and by means of propaganda which will lead the medical profession to acquaint the public with it. Sal Hepatica is advertised by the indirect method (*Jour. A. M. A.*, April 12, 1919, p. 1079).

**COLLOSOL COCAINE NOT ADMITTED TO N. N. R.**—Collosol Cocaine (Anglo-French Drug Co., Ltd., New York) is claimed to be a preparation containing 1 per cent. of cocaine in colloidal form and is alleged to possess a remarkably low toxicity. However, the A. M. A. Chemical Laboratory found that a specimen contained not more than 0.4 per cent. of alkaloid; hence it does not have the composition claimed and is in effect misbranded. Further, in England it was conceded that the preparation was not an "absolute colloid" and that the declaration with regard to the percentage of cocaine was incorrect (Barger, Dale and Durham reported that a specimen was found to contain but 0.25 per cent. of cocaine). Without considering other objections, the Council on Pharmacy and Chemistry declared Collosol Cocaine inadmissible to New and Nonofficial Remedies because its composition was not correctly declared (*Jour. A. M. A.*, April 12, 1919, p. 1094).

**CUPRASE NOT ADMITTED TO N. N. R.**—Cuprase, sold by the Anglo-French Drug Co., Ltd., New York, is stated to be a colloidal copper hydroxide containing 0.00121 gm. copper per 6 c.c. ampule. A box of eight ampules is sold by the agents for \$8.50, less 10 per cent. discount. The Council on Pharmacy and Chemistry reports that the therapeutic claims made in the advertising are those commonly made for cancer "cures" and are about equally convincing. It declares that some of the claims cannot be two severely condemned in a preparation which at best has only an experimental status. The evidence for the value of Cuprase published by the manufacturers or agents presents only vague generalities and no definite data. On the other hand, the evidence gathered by Weil some years ago permits an estimate of the value of Cuprase, and it is entirely unfavorable. In view of the extravagant and cruelly misleading claims and indefinite statement of composition, the Council voted that Cuprase is ineligible for New and Nonofficial Remedies (*Jour. A. M. A.*, April 12, 1919, p. 1095).

**GOLDENROD AND HAY FEVER.**—In spring hay fever is caused chiefly by the pollens of grasses. The fall hay fever in the Northern, Eastern and Southern states is for the most part attributed to the pollens of the ragweeds. In the Pacific and Rocky Mountain states they are replaced by the wormwoods. Scheppegrell has concluded that goldenrod does not cause hay fever (*Jour. A. M. A.*, April 19, 1919, p. 1162).

**GERMANY AND THE AMERICAN CHEMICAL INDUSTRY.**—The Alien Property Custodian has issued a report which, in part, is devoted to a discussion of the influence which Germany has had on the chemical industry in the United States. It outlines how the German government obtained a practical monopoly in

the United States in dyes, fine chemicals and synthetic drugs. The report explains how by-products of the dye works were converted into explosives—trinitrotoluene, for instance—and the advantage which the production of these explosives gave to Germany as a military power. The report explains that in medicinal chemicals very little real manufacture existed in the United States. The report discusses the ramifications of the "Big Six"—the German concerns which controlled the dye industry—in American industrial life and describes how their American branches were shown to be enemy owned and therefore taken over by the custodian. The "Big Six" were: Badische Anilin and Soda Fabrik, Farbenfabriken vorm. Friedr. Bayer and Co., Actien-Gesellschaft für Anilin-Fabrikation, Farbwerke vorm. Meister Lucius and Burning, Leopold Casella, G.m.b.H., and Kalle and Co. Aktien-Gesellschaft. The American firms were: Badische Co. of New York, Bauer Chemical Company, Bayer and Co. (Inc.), Berlin Aniline Works, Casella Co., Farbwerke Hoechst Co., Heyden Chemical Works, Kalle and Company, Merck and Co., Roessler and Hasslacher Chemical Company and Synthetic Patents Co. (Inc.). The report closes with a description of a corporation to be known as the Chemical Foundation, Inc., which is to acquire by purchase the German patents which in the past have formed a colossal obstacle to the American dyestuff industry. The Alien Property Custodian has sold to this company for the sum of \$250,000 approximately 4,500 patents (*Jour. A. M. A.*, April 19, 1919, p. 1176).

**ANTHELMINTICS.**—The earthworm reacts with symptoms of toxicity to all clinical anthelmintics just as do the parasitic intestinal worms. This fact has enabled Torald Sollmann to reinvestigate the claims long made for certain drugs. Spigelia was found to have rather feeble toxicity, but fresh pumpkin seed and squash seed were quite highly efficient (*Jour. A. M. A.*, April 26, 1919, p. 1228).

**ANNUAL MEETING OF THE COUNCIL ON PHARMACY AND CHEMISTRY.**—Among the subjects considered at the recent meeting were: The Council decided to publish at an early date a report on the unscientific and commercial propaganda for nonspecific protein therapy. The Council appointed a committee to study the problems of serum and vaccine therapy with a view of publishing the evidence obtainable regarding both the value of, and also the dangers incident to, the use of serums and vaccines. A special committee was appointed to report on the present status of pollen extracts in the prophylaxis and treatment of hay fever. The Council adopted a resolution urging legislation which shall require the Public Health Service to extend its control of serums, vaccines, toxins and antitoxins to cover other potent remedies that are used hypodermically or intravenously. The Council passed a resolution that the control of arsenamine by the Public Health Service shall be continued and the price controlled by the government. The Council decided to describe in a separate section of New and Nonofficial Remedies proprietary preparations of therapeutic value which are so exploited as to be inadmissible to New and Nonofficial Remedies. A committee was appointed to establish fuller cooperation between teachers of therapeutics and pharmacology in medical schools and the Council. A committee was appointed to determine the present status of radium water therapy (*Jour. A. M. A.*, April 26, 1919, p. 1243).

**VERACOLATE TABLETS.**—The Council on Pharmacy and Chemistry examined Veracolate (Marcy Co.) in 1915 and found it to be semisecret in composition, unscientific in combination and exploited under unwarranted claims (*Jour. A. M. A.*, April 26, 1919, p. 1245).

**RADIUM TREATMENT OF ARTHRITIS DEFORMANS.**—According to New and Nonofficial Remedies it has been claimed that radium emanation is of value in all forms of nonsuppurative, acute, subacute and chronic arthritis (syphilitic and tuberculous excepted), in chronic muscle and joint rheumatism (so-called), in arthritis deformans, in acute and chronic gout, etc. Its chief value is in the relief of pain. Curative results seem to be lacking (*Jour. A. M. A.*, April 26, 1919, p. 1245).

## BOOK REVIEWS

**PRINCIPLES AND PRACTICE OF OBSTETRICS.** By Joseph B. DeLee, A.M., M.D. Professor of Obstetrics at the Northwestern University Medical School. Third edition, thoroughly revised. Large octavo of 1089 pages, with 949 illustrations, 187 of them in colors. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$8.50 net.

No greater compliment could be paid an author than to have the demand for a new edition of such a standard textbook as DeLee's in war time. Obstetrics is the one great special branch which has not been stimulated by the world tragedy. In fact, many of the brightest and best of our younger men abandoned temporarily the life work which they had planned and donned the khaki along with those other patriots whose inclinations were more strictly and technically surgical. Hence, as Dr. DeLee says in his preface, this has resulted in a slowing up in obstetric literature which may after all be beneficial because it has given us the opportunity to more deliberately try out the recent contributions to science and from experience to prove the good and eliminate the erroneous.

Each chapter in this cyclopedic volume has been critically reviewed and pruning when necessary has been done. New valuations were put on Abderhalden's reaction, the relation of endocrine glands to gestation, urinary test for toxemias of gestation, etc., practical amplification was given to obstetric anesthesia, perineorraphy, cesarian section, conservative treatment of eclampsia and the rectal examination in labor. The volume is a fitting monument to Dr. DeLee and must prove an invaluable addition to the library of both student and physician. G. C. M.

**A TEXT-BOOK OF PHYSIOLOGY: FOR MEDICAL STUDENTS AND PHYSICIANS.** By William H. Howell, Ph.D., M.D., Professor of Physiology, Johns Hopkins University, Baltimore. Seventh Edition, Thoroughly Revised. Octavo of 1059 pages, 307 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth. \$5 net.

Howell's Physiology has been a standard textbook for the medical student and the physician for years, and has proved practical and up to date in its various editions. The seventh edition, thoroughly revised, is not exception.

A review of its table of contents and perusal of its pages demonstrate a comprehensiveness of experimental work and research of physiologic literature that it is quite remarkable. Especially noteworthy is the fearlessness with which older theories are questioned or discarded on the application of the newer knowledge of chemistry and physics to body functions.

It is very evident in the discussion of various theories, such as coagulation of blood, the etiologic causes of heart contraction, protein digestion, etc., that much progress is being made, but that the theories now held in many instances are simply a framework to experiment on rather than a complete machine.

With the modern tendency of dogmatism and ab-

solutism among many makers of books and some teachers of science, it is a wholesome sign to see the challenge of an unproved theory and the recognition that the newer facts of and researches in chemistry and electricity are likely to make clear many moot questions of animal physiology.

It is a fact today that many a practitioner is still basing his methods and conclusions in diagnosis and therapy on the physiologic teachings and opinions of twenty-five years ago. Those desirous of being up to date in the application of physiologic theories to clinical medicine will find Howell's latest edition the very best in modern experiment and thought.

S. P. C.

**PRINCIPLES AND PRACTICE OF INFANT FEEDING.** By Julius H. Hess, M.D., Major M. R. C., U. S. Army, active service. Professor and Head of the Department of Pediatrics, University of Illinois College of Medicine; Chief of Pediatric Staff, Cook County Hospital; Attending Pediatrician to Cook County, Michael Reese and Englewood Hospitals, Chicago. Illustrated. Published by F. A. Davis Company, Philadelphia; English Depot, Stanley Phillips, London, 1918. Price, \$2.

"It has been the author's experience that the best results obtained in teaching the principles and practice of infant feeding have been accomplished when the theory of feeding and the study of actual cases are combined." To this statement all pediatricists will undoubtedly give assent. The principal difficulty lies in the selection of scientific facts and the theory deduced from them. We have so many facts not sufficiently correlated with other facts and all kinds of theories on infant feeding are being taught.

Dr. Hess has made very good selection of facts in the short chapters on anatomy, physiology and metabolism. A good summary of the bacteriology of the digestive tract is given, but in subsequent chapters on nutritional and digestive disturbances these facts are ignored to a great extent.

The chapters on maternal nursing are admirable. The four-hour interval is recommended and no exceptions are given.

The chapters on nutritional disturbance in the main exploit the classification of Finkelstein. It is much to be regretted that such a strong attempt has been made to displace our old classification by the foreign terms. The term malnutrition means just as much as disturbed metabolic balance and certainly the etiology is not at all clear. The term dyspepsia has no advantage over our old gastro-intestinal indigestion. It is exceedingly unlikely that the term decomposition will displace the old name marasmus, although its clinical features have to be narrowed. Alimentary intoxication means no more than gastro-enteric intoxication. There are two recognized forms, one due to bacterial infection the other acidosis. No doubt there are other varieties but the food is not necessarily the source of them. The rôle of the vitamins is given no place although their influence in malnutrition has proved to be enormous.

It is our belief that it is a mistake to place the subject of infant feeding and nutritional disturbances on a functional basis. The theory that it is a disturbance, that tolerance is diminished, that the functions need rest, and we must gradually work up a stronger tolerance, is beautiful and in the main correct and has been known for a century, but the pediatrician should not be satisfied with this; he must search further and ascertain the nature and origin of the injury to the digestive tract. We are firmly convinced that nutritional disturbances due to the exhaustion of the digestive functions are rare clinical entities.

We recommend this work to students and practitioners who teach the German classification of nutritional disorders.

J. Z.



LICE AND THEIR MENACE TO MAN. By Lieut. L. L. Lloyd, R. A. M. C. (T.), Chief Entomologist in Northern Rhodesia. With a Chapter on Trench Fever, by Major W. Byam, R. A. M. C. London: Oxford University Press, Warwick Square, E. C. American Branch, 35 West Thirty-Second Street, New York, 1919.

This modest volume of only 130 pages, printed in large, clear type, should become a textbook not only in every medical college but also in public, parochial and private schools—everywhere—as the information on this most practical and important subject is expressed in language so plain that school children can easily grasp its essentials and learn the means of self-defense against the creeping, dangerous and abhorrent plague of lice.

The anatomical structure and other peculiarities that serve to distinguish the three main varieties of pediculi that infest mankind are clearly pointed out by the author, and the rôle of the body-louse in the effective communication of three principal human pestilences—typhus fever, relapsing fever, and trench fever—is exposed with convincing certainty.

It is shown from the bodily construction of this particular louse that the air circulation through its interior parts functions as both heart and lungs, and that agents which may clog the spiracles, or breathing pores, in the sides of its body will thus destroy its life by suffocation; this effect is merely mechanical and consequently there is no chemical problem or toxicologic mystery connected with the sweeping destruction of this form of parasitic vermin. It is further stated that lice will survive immersion in water at room temperature without injury as the high surface tension of that liquid prevents its access to the spiracles, while common forms of grease and oils enter them freely with fatal effect. This truth is but the scientific confirmation of knowledge and practice arrived at through experience and observation by primitive races and pioneer adventurers, the use of animal fats and vegetable oils by aboriginal peoples in all climates for protection against blood-sucking body vermin having been a common feature of their daily life from earliest times.

As a means of readily dealing with considerable numbers of infested persons, civil or military, the use of boiling water or steam under pressure is recommended for the destruction of both lice and nits in cotton and linen fabrics—those of wool and equipments of leather require special care in disinfection. Apparatus for such purpose can be readily improvised and after delousing processes, applicable to human bodies and clothing, are completed inunction of the person with common forms of fat would in reason prove effective against further trouble. On this point the author says, page 73:

"All lice hate grease, which runs over their bodies and chokes them. It is not necessary that any medication should be added to the grease and some of the so-called louse-destroying pomades are poisonous and dangerous in use."

The book has a good index and is sufficiently well illustrated. One error noted is on page 13 where a description of the salivary glands of the louse is confused by a repetition on the plate of the Figure 4, which should be 7.

G. H.

OXFORD LOOSE-LEAF MEDICINE. Edited by Henry A. Christian, A.M., M.D., Hersey Professor of Theory and Practice of Physics, Harvard; Physician in Chief, Peter Bent Brigham Hospital, Boston; and Sir James Mackenzie, M.D., F.R.S., F.R.C.P., Physician in the London Hospital (in charge of Cardiac Department); Consulting Physician to the Victoria Hospital, Burnley. Five volumes. Cloth. Price, \$52.50. Oxford University Press, 35 W. Thirty-Second Street, New York, N. Y.

The reviewer's family once acquired a "loose-leaf" encyclopedia. More than the leaves were loose in this work. Added to this the reviewer confesses an antipathy to composite works written largely by men who have been conscripted into service. Therefore, when the first section of this work was laid before him he brought forth his tomahawk prepared to do battle. The first section to meet his eye naturally was the introduction. This is by Christian. This author speaks so convincingly on the importance of the fundamental study of pathology as a necessary basis for the proper evolution of the discoveries of recent years that the reviewer stopped in the middle of page 5 to order the series of books in the hope that his young associates might read these convincing lines. The modern biologist-anatomist has robbed the profession of the science of applied anatomy and the same strain threatens to rob internal medicine of the fruits of knowledge gained in centuries of study in morbid structure. The lack of autopsies Christian points out is too often due to the fact that there is an embarrassing number of lessons revealed in some of them which the chief of clinics does not understand.

This section is followed by one by James Mackenzie on the future of medicine. At first blush one is taken somewhat aback at the thought that some one is so optimistic as to enter into a prediction on the future development of medicine. A closer examination, however, reveals the fact that the author engages in a stock-taking, and on this basis philosophizes on the general method of study, being quite as much concerned in the evolution of the individual as with the future hope of medical science in the abstract.

Both these chapters should make good reading for the young physician who has advanced far enough to appreciate the bigness of the task before him.

Then follow chapters on the Heritage of Modern Medicine, by William R. Johnson, in which is a brief outline of the development of medicine. To one who possesses Garrison's masterly presentation this chapter will be read with impatience. A chapter by E. V. McCollum on The Part Played in Diet by Foods of Unknown Chemical Nature, and one by Henry Sewell on Climates in Relation to Health and Diseases, treat the respective subjects in a broad way, tending to excite to further study rather than to satisfy a mild desire for simple information.

The prospectus contains many of the most illustrious names in medicine today. Among them we note DuBois on Clinical Calorimetry Methods of Study of Metabolism; Henderson, The Physico-Chemical Concept of Body Reactions; Peabody, Gaseous Exchange in the Body—Newer Methods of Studying Respiration; Van Slyke, Bio-Chemistry of Disease. These and a number of others to be presented in the first volume. The second volume is to treat of the lungs, circulatory organs and kidneys, the third volume on digestive disturbances and diseases of metabolism; the fourth volume will treat of diseases of the nervous system, and the fifth and final volume will discuss the acute infectious diseases.

From the evidence the first part presents to the reviewer, it is obvious that the work is not intended to rival the "special representations of pharmaceutical houses," nor to answer such profound questions as to how black cats cure fever. The work seems rather to aim at that limited group of medical men who desire to engage in medicine as an intellectual pursuit. To this group it seems to offer much. At any rate, being loose leafed, it will be possible for the possessor to throw out such parts as annoy him, a merit not possessed by many systems that stabilize our shelves against the vibratory influences of earthquakes.

J. M. B.

# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

Volume XVI

CHICAGO, ILL., AND ST. LOUIS, MO., JULY, 1919

NUMBER 7

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3529 Pine St., St. Louis, Mo.

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### ORIGINAL ARTICLES

#### CHRONIC ENDOMETRITIS \*

OTTO SCHWARZ, M.D.

AND

C. O. KOHLBRY, M.D.

ST. LOUIS

Chronic endometritis is an inflammatory process in the stroma of the endometrium characterized chiefly by a more or less marked infiltration of small round cells, with or without the presence of plasma cells. Formerly the term "chronic endometritis" was applied in a rather indefinite manner to numerous lesions of the endometrium, many of which were not of an inflammatory nature. The well known investigations of Hitschman and Adler on a "Chronic Endometritis" and "The Structure of the Endometrium," which were published in 1907 and 1908, respectively, have given us the most accurate description of the endometrium. These authorities insist that chronic endometritis is of only one type, namely, the interstitial form. Their ideas have been accepted almost universally. Previous to these publications a few writers, notably Cullen, suggested such a restricted application of the term "chronic endometritis." Cullen called attention to it as early as 1898, but it was not until after the publications of Hitschman and Adler that this restricted application was generally accepted.

With this limitation of the term "chronic endometritis" to lesions of the endometrium which were of a true inflammatory nature, it became a fairly general opinion that the condition was comparatively infrequent. Cullen found chronic endometritis forty-nine times in 1,800 cases, and explains this infrequency by the fact that inflammations of the endometrium are quite

transitory, returning to normal rapidly owing to the adequate drainage afforded by the uterine canal. Kelly and Hurdon have stated that chronic endometritis is comparatively infrequent, Kelly even mentioning that it is a rather rare condition. These opinions were given about ten or more years ago, and to our knowledge have not been modified. Information obtained from such authorities and the general impression given by the numerous textbooks led us also to believe that chronic endometritis was only occasionally met with.

During the last two and one-half years in the examination of curettings in the routine manner, it was very surprising to note the unusual frequency with which the diagnosis of chronic interstitial endometritis was being made. We felt that perhaps we had been too free with the diagnosis of chronic inflammation and thought it would be interesting to study these cases as a whole in order to confirm or modify our previous findings.

To diagnosticate such specimens intelligently one must be thoroughly familiar with the structure of the endometrium through the various phases of the menstrual cycle, particularly with the changes that take place in the stroma during each phase. It seems desirable before going further to briefly describe these stroma changes. For convenience, the phases of the menstrual cycle have been divided as follows: The premenstrual, or period of growth, usual duration about 5 to 7 days; the menstrual phase, or period of degeneration, usual duration 4 to 5 days; the postmenstrual phase, or period of recuperation, usual duration 7 days, and the interval or resting stage, usual duration from 10 to 12 days. In the early interval the stroma cells are spindle-shaped, rather closely packed in the superficial portions. The protoplasm is not large but distinct, being drawn out in processes anastomosing with similar processes from other stroma cells closing off the intercellular spaces. The greater portion of the cells is made up of the nucleus, which stains rather deeply. Mitotic figures can be seen quite fre-

\* Read at the meeting of the Washington University Medical Society, May 19, 1919.

\* From the Department of Obstetrics and Gynecology, Washington University School of Medicine.



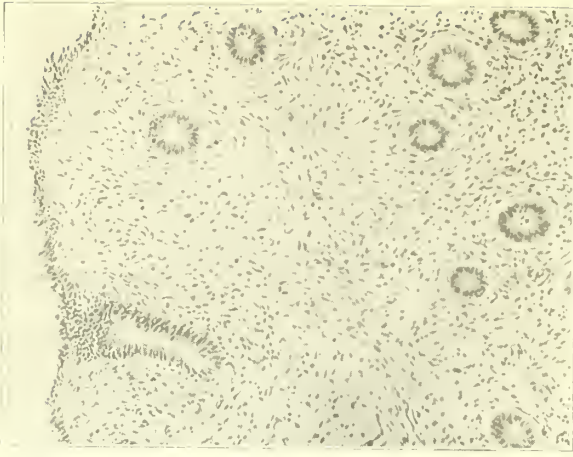


Fig. 1.—Normal endometrium, midinterval phase; glands comparatively simple in type. Stroma cells spindle-shaped, protoplasm distinct; slightly edematous. No areas of small, round cell infiltration in stroma or about glands.

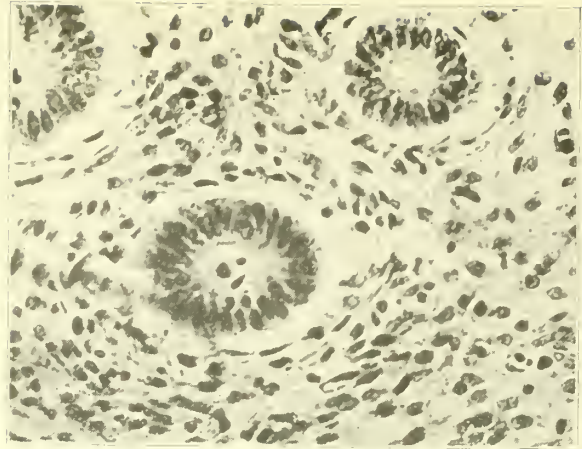


Fig. 2.—High power of Fig. 1. Shows the stroma cells with their characteristic spindle-shaped nucleus, cells have very distinct protoplasm. Only an occasional small round cell is seen.

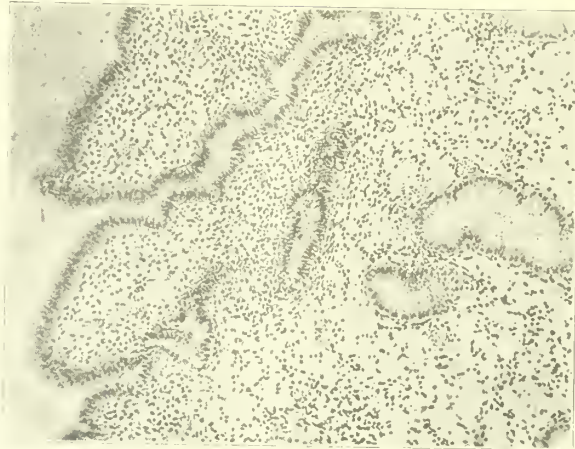


Fig. 3.—Normal endometrium, premenstrual, four days before the expected period. Glands are markedly enlarged, dilated and irregular in shape. The individual gland cells are considerably higher than in the resting stage. There is marked edema of the stroma, the cells being widely separated. The stroma cells are swollen, those immediately under the lining epithelium resembling somewhat decidual cells. No round cell infiltration.

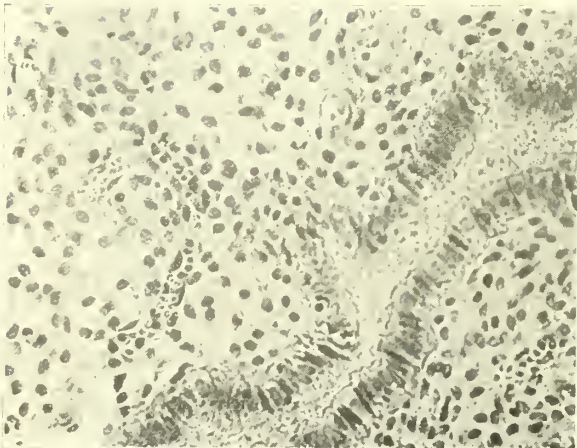


Fig. 4.—High power of Fig. 3. Shows edema of stroma and enlargement of the stroma cells. Capillaries congested. Only an occasional small round cell is seen.

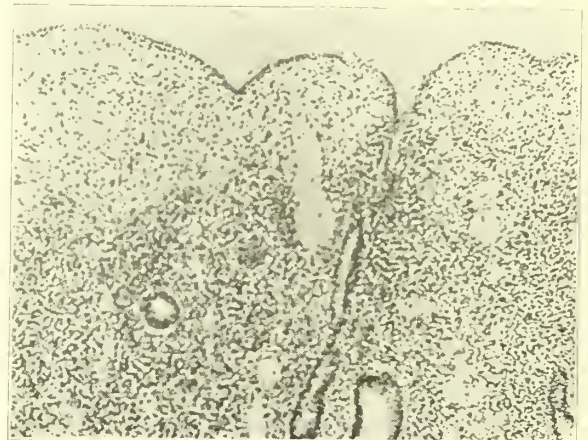


Fig. 5.—Normal endometrium, one day postmenstrual. The light area immediately underneath lining epithelium is the remaining subepithelial hematoma. The stroma elsewhere is very compact and the individual cells markedly shrunken staining intensively with hematoxylin. No round cell infiltration.



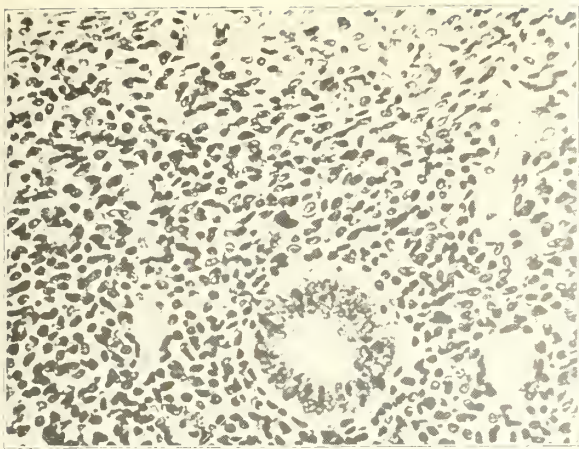


Fig. 6.—High power of Fig. 5. Shows deep staining closely packed stroma cells with very little protoplasm; only an occasional small round cell is seen.

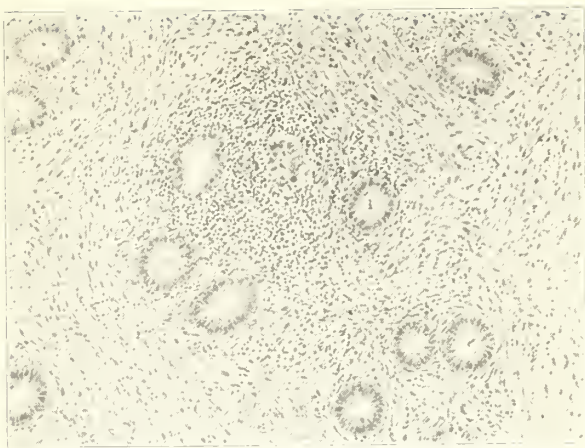


Fig. 7.—Chronic interstitial endometritis. In about the center of the picture is a large area of small round cell infiltration. It is well grouped about the glands and is also diffusely scattered throughout the section. A few polymorphonuclear cells are present in this group.

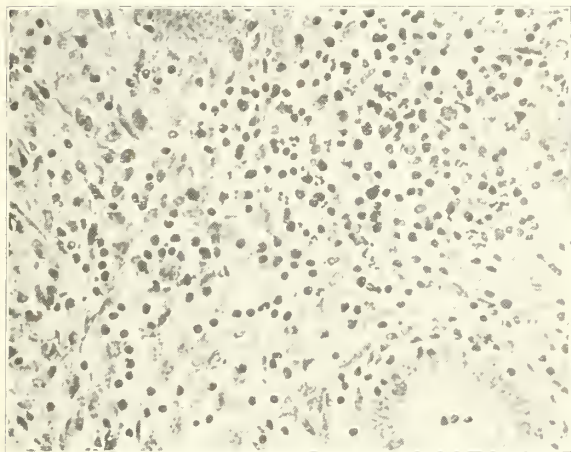


Fig. 8.—High power of Fig. 7. Shows small round cells in great numbers densely infiltrating the stroma. Stroma cells can be seen in lower half of picture. Quite a few polymorphonuclear leukocytes can be seen in this field.

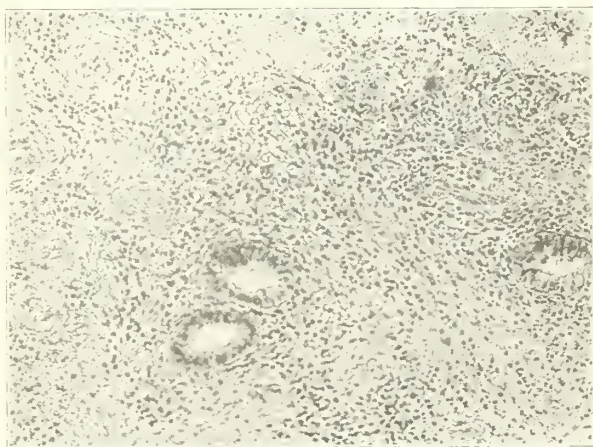


Fig. 9.—Chronic interstitial endometritis. Marked diffuse small round cell and plasma cell infiltration throughout the stroma. Under high power this section showed plasma cells in great numbers.

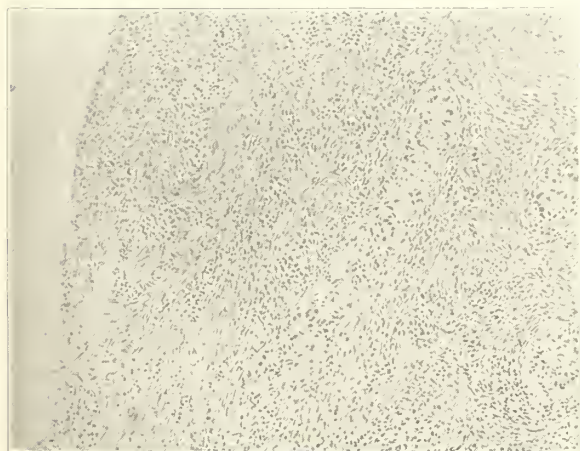


Fig. 10.—Chronic interstitial endometritis. Marked diffuse infiltration of small round cells and plasma cells. The endometrium in this case was about 1½ mm. thick, and contained only very few glands. Four are seen in this picture, somewhat broken up.

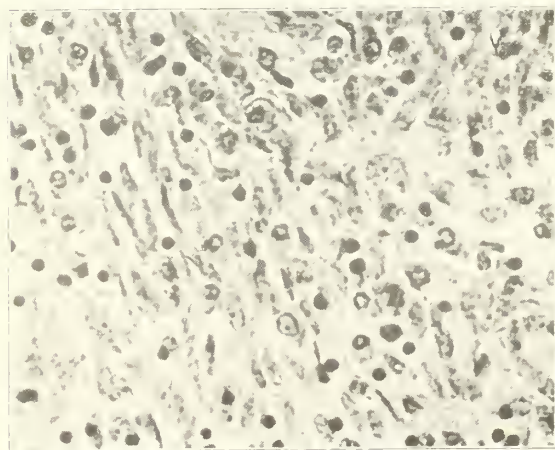


Fig. 11.—High power of Fig. 10. In this picture are shown many small round cells, plasma cells and stroma cells. The small round cells have a small sharp rounded nucleus without practically any protoplasm. The plasma cells are large ovoid cells with an eccentrically placed nucleus occupying one of the ends of the cell, the nucleus being of a pycnotic type, the chromatin distributed in clumps around the periphery. The stroma cells can be best seen in the lower half of the picture, as large, slender, pale staining cells with slender fusiform nuclei.



quently up to the middle of the interval. In the latter part of the interval the cells become gradually larger, chiefly at the expense of the protoplasm. Both nucleus and protoplasm stain with less intensity. With the beginning of the premenstrual stage there is considerable edema, which increases up to the time of menstruation; the edema is particularly prominent in the upper half of the endometrium, markedly distending the intercellular spaces. The cell changes are also most prominent in this phase, especially those in the upper portion of the endometrium. Both protoplasm and nucleus of the stroma cells have now become considerably paler, the protoplasm is very much increased, and the cells become polygonal in shape, somewhat resembling decidual cells. The cells maintain this character until the period of menstruation, after which they rapidly diminish in size; the nuclei become contracted and spindle-shaped, the protoplasm shrinks rapidly, so that by the time the postmenstrual stage is reached the protoplasm can scarcely be recognized, the cell being made up almost entirely of a spindle-shaped, deep-staining nucleus. These cells enlarge slightly toward the end of the postmenstrual stage and at this period occasional mitotic figures can be seen.

Small round cells are found at all times in the stroma, but only in very small numbers except in the very late premenstrual stage, the menstrual stage, and the very early postmenstrual stage; during these periods they are definitely increased. Lymphoid follicles appear occasionally in the endometrium. These are small, compact, circumscribed bodies of lymphocytes which are not readily confused with an inflammatory process because they are usually situated deep in the endometrium, and are rather sharply demarcated from the rest of the stroma. The number of small round cells present in the normal endometrium during the interval, early premenstrual and late postmenstrual stages is apparently not very great. We were unable to find a clear and definite account in regard to their number. However, from our own observation on many mucosae we feel that normally they are not at all numerous.

Our study consisted of 225 cases in which the endometrium was removed by curettage, and eighty cases in which the uteri were removed at operation or at necropsy. The cases of curettage were selected from laboratory sections, taking such sections consecutively in their reverse operative order. The eighty uteri were taken from a series which had been used for a previous study of chronic metritis and chronic subinvolution, and were uteri which showed no evidence of new growth.

In studying these cases necessary clinical data were obtained and particular importance was attached to the date of the last menstrual period and to the date of operation. This was necessary to determine the proper phase in order to compare it with the actual microscopic findings. Each specimen was then placed in its corresponding phase, and if there was an abnormality as regards the cycle, the proper diagnosis was applied. The amount of round cell infiltration was given considerable attention, as we thought we could then judge with considerable accuracy what might be considered normal for the different phases. Plasma cells and polynuclear leukocytes were also searched for. We felt that, in order to make a diagnosis of chronic inflammation, it was necessary to find small round cells, if alone, in considerable numbers. These must infiltrate the upper half of the endometrium, either in a diffuse manner or appear in small groups. They should also be found, when they are present in any great number, grouped around the glands, both superficial and deep. If we found definite plasma cells we attached no particular importance to the amount of small-celled infiltration; however, whenever plasma cells were found, the small round cells were usually very abundant.

Thus in our study of 305 specimens of endometrium we were able to diagnose chronic interstitial endometritis in seventy cases. The cases which show no inflammation numbered 235. In this latter series there were represented all phases of the cycle, more or less evenly distributed between two or three days postmenstrual to within two days of the expected flow. There were only a few cases which did not come within this part of the cycle. The number of round cells was carefully noted in all these and it was not very difficult to determine the absence of an inflammatory process. In none of these cases did small round cells appear in great numbers. They were usually found thinly scattered throughout the mucosa, occasionally in small groups of six or eight cells, but never in large groups around the glands or beneath the epithelial lining.

Seventy specimens of chronic inflammation were divided into classes according to the phase to which they belonged. This placed sixteen specimens in the early premenstrual phase and none in the later period. There was one menstruating uterus. Postmenstrual mucosae were found fifteen times, seven early and eight late. Thirty-seven specimens were found in the interval, eighteen in the early interval and nineteen in the late interval. The glands were pathologic in twelve instances, the diagnosis of gland hypertrophy being made five times, and gland hyperplasia seven times. There was one

senile endometrium, and in two cases there was tuberculosis.

Small round cells were found alone twenty-four times, with plasma cells forty-one times, and with polynuclear leukocytes five times. Polynuclear leukocytes were found in seventeen specimens, never appearing in great numbers. They were always present with round cell infiltration and also with round cell infiltration and plasma cells. The amount of round cell infiltration was described as one, two and three plus. One plus designated a considerable amount, two plus a marked amount, and three plus an immense amount. When round cell infiltration was the only finding there was a considerable infiltration in six specimens, a marked amount in sixteen and an immense amount in two.

We thought by studying the clinical histories closely that we could come to some conclusion as to the etiology of many of these infections. We felt that staining for bacteria in tissue might be of value. We stained ten of the most marked chronic inflammations and were unable to demonstrate bacteria. We place no particular stress on these findings for several reasons: The tissues were not fixed in Zenker's solution but in 10 per cent. formalin; they were imbedded in celloidin and cut ten to twelve microns thick; and the tissue in most instances was not stained for bacteria until after they had been blocked in celloidin many months.

In the pelvic findings we paid particular attention to the condition of the tubes. In our seventy cases of chronic endometritis we found chronic salpingitis in seventeen cases. Included in these seventy cases were twenty cases of uteri and adnexa removed at operation of the original series of eighty such cases. Of these twenty cases, eight of them showed chronic salpingitis. In these eight cases the endometrial infection was very marked. In the fifty cases of curettings, where the clinical findings were used to diagnose salpingitis, only nine cases were found. Taking into consideration that the larger percentages of inflamed tubes are of gonorrheal origin, it would seem that gonorrheal tubes play only a little part in keeping up the endometrial infections.

In the series a history of puerperal infection could be definitely obtained only in eight cases. Fifty-three cases gave histories of one or more pregnancies; thirty-five of these cases gave a history of one or more miscarriages. There were thirteen cases of no pregnancies. About one-third of these were cases of marriages of less than a year. In fifty cases of curettings, chronic pelvic cellulitis was found clinically only eight times. In the series of seventy cases of chronic endometritis there were fifty-two in-

stances of enlarged uteri eight of which were in part due to myomata. The uterus was re-troverted in eight cases. From this résumé, it is rather difficult to say whether a majority of these infections are gonorrheal or pyogenic.

We feel that the complement fixation test for gonorrhea might clear up this matter. As the demonstration of bacteria by smear and culture in these cases, so far as we know, has never been successful, it seems that the complement fixation test may be our only means of clearing up this matter. In the clinic we are now running a series of gonorrheal complement fixation tests on many chronic pelvic inflammations. This work is not far enough advanced at present to make any definite statement as regards its value.

We also feel that in making an accurate diagnosis of chronic endometritis, the scrapings must be well handled in the laboratory. We place the curettings in 10 per cent. formalin for twenty-four hours, 95 per cent. alcohol six hours, absolute alcohol two hours, absolute alcohol and ether over night, and twenty-four hours in thick celloidin. They are then blocked and hardened in 95 per cent. alcohol for six hours before cutting. This routine is followed except in a few very urgent cases. The report is usually ready in five days. We have experienced considerable difficulty in getting our scrapings free of clotted blood. It is very discouraging to examine scrapings which, for the most part, consist of clotted blood. Every one who examines scrapings frequently has had this experience. Recently we have used a method at operation which allows us to collect our scrapings free of clotted blood. We have ready a pint of sterile 4 per cent. sodium citrate in physiological salt solution; this is divided equally in two small sterile basins on the instrument table. When we are ready to scrape we pour a small amount of the citrate solution into the vagina filling the posterior fornix; as the scrapings come out of the external os they fall in the citrate solution, which from time to time is emptied through the grooved, weighted speculum in the other basin of citrate solution below it. After the operation the contents of the basin are strained through gauze and only the clean cut pieces of endometrium remain behind. These are rinsed rapidly in cold water and placed in a bottle of 10 per cent. formalin.

The sections are cut from 10 to 12 microns in thickness and are stained with hematoxylin and eosin. We stain fairly light with hematoxylin for in this manner we are able to demonstrate plasma cells very well. This seems to us so satisfactory that we feel special staining for plasma cells is unnecessary.

As a result of our study we feel that chronic interstitial endometritis is rather frequently



met with. It is customary in our hospital service to treat many cases of chronic salpingitis and pelvic cellulitis palliatively, and this applied even more to our dispensary service where a considerable percentage of the cases are of this character. We think that in a series of such cases the percentage of chronic endometritis would be much higher than in the one which we have studied. Our series included many cases with neither history of inflammation or with clinical inflammatory findings, and many were cases of incomplete abortion. The number of small round cells in the early premenstrual, late postmenstrual and interval phases is never very great, and their arrangement does not correspond to what we find in a chronic inflammatory process. As at least 90 per cent. of curetages are performed during these periods of the cycle, and over half in the interval period, it would not be difficult to determine whether or not they are present in pathologic number. We also feel that the presence of small round cells alone in marked numbers, as was the case in twenty-four instances in our series, is sufficient evidence on which to base a diagnosis of chronic interstitial endometritis.

820 University Club Building.

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### THE PHYSICIAN'S SERVICE \*

#### PRESIDENT'S ADDRESS

M. P. OVERHOLSER, M.D.  
 HARRISONVILLE, MO.

My message to you on this occasion will be short—more brief perhaps than you anticipate. I feel that our time at the opening of the scientific work of this important annual meeting of the physicians of our state is too valuable to be spent in lengthy addresses. Our scientific program teems with subjects of interest and of practical value to the medical man, and many of the physicians and surgeons who have sacrificed their time and business interests to attend this meeting are here, ready and waiting to contribute their knowledge and experience to the medical profession.

While I take the privilege of expressing my gratitude to the medical men of Missouri for the distinction given me, I would humbly divest myself of all selfish interests, seeking no glory by a vain attempt to present to you, in a lengthy discourse, perhaps some impractical subject, as I feel that the true purpose of this gathering of physicians and surgeons after the unusual conditions and hardships of the past year, should be to honor you. This opportunity therefore shall be yours, not mine. I commend you for your attendance at this meeting, for your attainments in the profession, for your diligent and faithful efforts in the work of organization under the unusual and numerous difficulties of the past twelve months, for your strenuous labors and persistent care of the sick during the raging epidemic of influenza, and last but not least for your loyalty, devotion, sacrifice, and service to our country.

There has been no time in the history of the world when the opportunities for the relief of human suffering has been so great as during the past year, and no time when our government has made such an urgent appeal to the physicians and surgeons of our land for their help in the great work of relieving human distress and suffering by medicine and surgery as during the late world-wide war.

"It was the doctor who made this world struggle probably the least deadly ever fought in proportion to the number engaged. In previous wars 95 per cent. of the deaths was caused by disease, epidemics, and pestilences. An army camp was the hotbed of infections, a most fertile field for the breeding of disease germs. During the recent war it was made one of the most sanitary habitations for mankind. Probably the most important sanitary triumph of the war has been the wiping out of typhoid fever in our army camps. Another of the great records made by the physicians and surgeons is the modern surgical treatment and care of the wounded soldiers in the field and base hospitals.

We are told that the masterly control of wound infections by the army surgeons has been such that of the wounded who survived six hours 90 per cent. recovered. Of those who reached the field hospitals 95 per cent. recovered, and of those who arrived at the base hospitals 98 per cent. got well. This is the first war where the doctor has been given a free hand and he has responded by almost wiping out disease, making the death rate from it in the camps lower than that at home, saving 90 per cent. of the wounded and sending 80 per cent. of them back to the firing line within forty days, and making the death rate from all causes in this most appalling of all wars the lowest on record, barely 3 per cent. per annum."

\* Read at the Sixty-Second Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.

We are told that the conservation of the lives of the soldiers by the doctors was so recognized by the enemy "that they counted one doctor worth 500 soldiers, and one stretcher bearer equivalent to ten combatants and issued orders to their snipers and gunmen accordingly."

We honor the medical men of our land for these great achievements and we are especially proud of the 3,300 members of the organized medical profession of Missouri who have done their share of this great work at home and abroad.

In the history of our nation there has never been a time when the physicians and surgeons of our states were put to such a severe test as during the past year. Those of us who remained at home contributed in various ways to the activities of the government, to the gallant soldiers on the battle fields, and with constant and persevering service cared for the numerous sick citizens of the various communities during the deadly and widespread epidemic of influenza.

But with all the hardships endured by the physicians and surgeons of our state during the past year in war and at home, our medical organization has remained intact, and has emerged from this great maelstrom of war and pestilence with comparatively few scars, and with a far stronger determination on the part of the physicians to build still greater this splendid organized force of medical men for the good it can do in the future for afflicted and suffering humanity.

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**DEDICATION OF FLAG TO MEMBERS OF  
THE MISSOURI STATE MEDICAL ASSO-  
CIATION WHO ENLISTED IN THE  
WAR AGAINST GERMANY**

HERMAN E. PEARSE, M.D.  
KANSAS CITY, MO.

Mr. President, gentlemen of the Missouri State Medical Association, ladies, our guests, and the heroes whom we are today assembled to honor: It is indeed a pleasure and an honor to be allowed to represent this great body of medical men in extending to you the gift of a flag of the United States, purchased by this Association, to be given to the men who have defended that flag in the worst war that the white man has ever known. To have this honor given to me is both a surprise and a delight.

There is perhaps no one in the world whom I more admire than the practitioner of medicine whom I meet in his daily rounds. His responsibilities are so well known to me, his

ambitions and his aspirations are so close to my own heart, his membership in this Association and the work done for it have perhaps been as well known to me as to almost any other member sitting in this house today. What it means for you men whom we honor today to leave this Association, to leave the practice of medicine, to leave your homes, to leave your friends, to go abroad in uniform to take up the battle for that flag that we all love so well, is better known to me than you would think, for I have had the honor and the pleasure to have been called into the homes of many of you, into the practice of many of you, and into the communities of many of you. I know what sacrifices you made when you went abroad to defend this flag.

And therefore I thank you, Mr. President, for giving me the opportunity to present this flag to these men, these representative doctors, these jewels in the crown of the Missouri State Medical Association, who are gathered here today to receive it, and to receive at the same time the heartfelt thanks of this Association for the work they did for it. Most of us have flags that we keep at home, that we love, and honor, and adore. We want you all to love, and honor, and adore this flag. We want you to do it for the same reason we ourselves hold the old ensigns we have at home so dear.

To build this flag required the braving of a long sea voyage and settling in a strange land beset with savages and wild beasts. Our ancestors did this; established here the land for which this flag stands. One by one, with their blood and their strength and their lives, they carved out from the savage wilderness the colonies that the stripes on this flag stand for. Colonies that were slow in growth, colonies that suffered every privation, knitted and builded into the hearts of the people of America at that date, as the stripes of this flag are knitted and builded into the lives of the people of this date; sealed with the blood of thousands of men, consecrated by the tears of millions of women, and bearing on its graceful, waving folds the pledge of other millions that it shall never be disgraced so long as American men live to uphold it.

And you and I have watched the stars grow on the flag until they have reached their present number. We know the states they represent and we know the mothers and the fathers who make those states. A flag is great only as the nation it waves over is great. A nation is just what the homely life of its people make it. It is the lives of people that the flag stands for, and in all the trials that come to men and women in braving the wilderness, in laying out communities, and in building states and cities for

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\* Read at the Sixty-Second Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



which this splendid flag stands, there is no one who is closer to the hearts and lives of these people than their family doctor. There is no one else when darkness hovers over the land, and death raps at the homes, there is no one else, I say, who can by his presence so help and comfort and save as the family doctor. There is no one else who feels the responsibility he bears to a people of a nation like the family doctor. There is no one else who lays down so much. There is no one else who bleeds himself so white. There is no one else who makes the sacrifice to such an extent, when he leaves his business, and leaves his people, and turns his back on all that is dear to him, and on all the responsibilities that he holds so heavy on his shoulders, there is no one else, I say, equals in any degree the sacrifice made by the family doctor when, for the sake of this flag and the people it represents, he leaves them to their own fate and goes to take care of their sons who are defending the flag.

And you members of the Missouri State Medical Association were called on to do this very thing. To make this sacrifice and go and care for the boys in camp, and trench, and battlefield, and hospitals; not because an enemy was invading our shores, but because we were led into the greatest war that the world has ever waged; because American women and American children were drowned when ships were sunk by gun fire on the ocean; because American men were drowned when ships were torpedoed on the ocean; because the rights that American people expect and demand on the high seas, and on foreign shores, were denied them, and because we found an ancient people, who again and again had threatened civilization, were threatening it for the thirty-third time. Here is the record as published by the *New York Tribune* in 1919:

"One hundred years before Christ 300,000 Germans invaded France, murdering, burning, pillaging as they went. At Aix-en-Provence they were stopped and defeated. They sued for peace and swore they would never do it again. Sixty years afterward 240,000 Germans invaded the Jura district of France. Six years later 400,000 Germans invaded the territory between the Meuse and the Oise. They were beaten. They swore they would never do it again. Sixty years before Christ the Germans invaded the left bank of the Rhine. Two hundred and thirty years after Christ the Germans invaded France. They were beaten. They swore they would never do it again. Twenty years later another invasion, another defeat, another solemn pledge, 'never again.' In 274 A. D., the Rhine basin was invaded by

the Germans; in 275, northeastern France. In 301 Langres was pillaged. The invaders were beaten and they swore 'never again.' In 351 they reconquered the left bank of the Rhine. In 354 they devastated Lyons, in 360 Besançon. In 364 they invaded and plundered Belgium. Here is the chronology of the subsequent invasions: A. D. 372, 382, 400, 410, 513, 800, 858, 978, 1121, 1214, 1513, 1521, 1523, 1536, 1544, 1552, 1553, 1567, 1569, 1576, 1587, 1636, 1674, 1675, 1707, 1708, 1744, 1792, 1793, 1814, 1815, 1870, 1914. Thirty-three invasions in a little over 1,500 years, an average of one invasion every fifty years. Whenever they were successful, the Germans celebrated with unspeakable atrocities. Whenever they were beaten they swore they would 'never do it again.'"

These facts being history it was up to the American soldier to take part in the fight that was to end these intolerable conditions, and he has done it. How well he has accomplished his task we all know. Missouri supplied 1,507 physicians to the Medical Corps of the Army and the Medical Reserve Force of the Navy. Of this number 1,038 were members of our Association. There are two members of Clay County Medical Society who have been decorated with the Croix de Guerre. They are Dr. George R. Dagg, North Kansas City, and Dr. Burton Maltby, Liberty. Today as readjustment comes over our land, the doctor finds himself home again, with his practice gone, and his patients scattered among other men. However, he finds something else. He finds in the hearts of the people of these United States, and in the hearts of the men and officers of this Association, an abiding thankfulness, and an abiding appreciation of the great sacrifice that he has made, and an abiding desire to show honor and thankfulness in every way, and the appreciation that we all feel for you who have so nobly done your part. We welcome you home. We dedicate this splendid flag to you. We are proud of every one of you.

There is no day but has its night. There is no joy without a cloud. War has always had glory for its heroes; also it has always flung the shadow of mourning and death across the land. In this war we have not escaped. In this war we have to mourn our dead. Eleven golden stars shine today on our Service Flag in memory of the eleven men who sleep wherever death overtook them in the line of their duty. Some in the south part of our own land, some in the west, some in the east, some of them overseas. Disease killed four, a bomb dropped by a German airplane killed one. Snipers and shells and accidents account for the rest. And it is with sorrow, it is with regret, and with an apprecia-

tion and a love that amounts almost to adoration, that I read for you the names of those heroes whose lives are counted by the eleven golden stars on the Service Flag:

Lieut. William T. Fitzsimmons of Jackson County.  
 Lieut. Guy A. Tull of Jackson County.  
 Lieut. Floyd S. Bates of Bates County.  
 Lieut. Frank V. Frazier of Daviess County.  
 Lieut. Charles R. Long of Pettis County.  
 Lieut. J. Louis Swartz of St. Louis.  
 Capt. George E. Farr of Shelby County.  
 Capt. Wilford A. Fair of Cass County.  
 Capt. John D. Hess of Dunklin County.  
 Lieut. Lloyd R. Boutwell and Lieut. Wilford W. Martin, who did not belong to this Association.

These did not come back. These we shall not have with us again. They have answered their last roll call. We can only say of them, as did the poet of old:

"To every man upon this earth,  
 Death cometh soon, or late;  
 And how may a man die better  
 Than in facing dreadful odds,  
 For the ashes of his fathers,  
 And the temples of his gods?"

Our hats are off to these gold stars, and to the memory of the men whom they represent. And to this Association, and to the families of these men we one and all pledge ourselves to hold their memory dear and sacred so long as the Association shall meet in this state.

Rialto Building.

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#### BASE HOSPITAL NO. 28 \*

G. H. HOXIE, M.D.  
 KANSAS CITY, MO.

The service of Base Hospital No. 21 was so much larger than that of Base Hospital No. 28 that I feel some hesitancy in telling our story. Although we were organized in the spring of 1917 we did not get abroad until in June, 1918. But we did get over in time to help care for the wounded from all the battles in which the Americans had a prominent part. We were on duty from the July offensive at Chateau Thierry, through the time of the Argonne, in fact until February, 1919. All of us who went over felt that we had done what we could and that we had an enviable time—an experience that we would not have missed for the world.

Dr. Binnie organized the unit and kept it going during the long months when the War Department was deciding whether we should be taken as individuals or as a unit. Finally we were sent down to Fort McPherson in February, 1918, and put through our paces as indi-

viduals, learning how to form "fours right," and a lot of other things for which we had apparently very little use, under the guidance of Dr. Milne, who had been kept in service at various training camps since June, 1917. We had to learn as much of military discipline as our officers could get into us, which was not very much. Our commanding officer was Colonel Banister, of the regular army. We were very fortunate to have him, not only because of his personality but because of his long experience, he having been thirty-two years in the service and being very much inclined to be merciful with the new and unsophisticated officers.

We left New York June 12 and arrived in Liverpool June 24; then we were sent over to France, arriving at Limoges July 2. It was during the weeks of our journey that the Germans had been steadily advancing towards Paris and the coast, so that we were fearful whether we should have a place to land in France, or whether it would be necessary for us to go to Italy or stay in England. But our trip was uneventful, though at times uncomfortable. We found at Limoges the Tulane University Unit, Base Hospital No. 24, with a 500 bed hospital which had been in operation for four months, and the unit from the Presbyterian Hospital of Chicago, No. 13, which had preceded us by a couple of weeks. We found there had been staked out for us across the river the beginnings of a hospital. The barracks were built on the Morajam system. These barracks were narrower than the Adrain barracks seen on this side. Only a few barracks were completed, so the first task of our unit was the completion of the buildings and the attempt to get a certain amount of equipment. We did get enough so that we could receive some patients on July 23, and a train-load on July 27. From that time on the hospital rapidly filled up for as soon as a barrack was completed, patients were moved in. So we ran first 1,500 patients, then 2,000, then 2,500, and finally just before the armistice 2,965. The first patients were from the Chateau Thierry-Soissons offensive. We were so far back of the line that it took ordinarily a good deal of time for our patients to reach us, but in the latter part of the offensive towards Soissons the hospitals nearer the front began to be filled up and we got some of the wounded direct (twenty-four hours) and had then some experience in work of the character done in the evacuation hospitals such as that of Base Hospital No. 21. But ordinarily our work was base hospital work in the real sense of the word. We received patients for final treatment and usually after they had been handled

\* Read in the Victory Session at the Sixty-Second Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



by some other hospital. This gave us perhaps rather exceptional advantages. We had a chance to work out, as well as the equipment would allow, medical problems on a number of these men. Like No. 21, No. 28 had a preponderance of medical patients. I think Major Henderson, head of the surgical service when Colonel Binnie was sent to the front, reported 2,500 cases of the operative type; and when you consider that we had about 10,000 in the seven months we were there you will see that the percentage on the medical side was considerably higher than in the case of No. 21. The work was also influenced by the fact that

nurses, and 6 female civilian employees. At Fort McPherson we received 47 men and 10 more officers. When we got to the other side we had to have more men and officers, but because of the frequent changes and shifts it is impossible to mention a uniform strength. But it may interest you to know that for much of the time each ward surgeon had an average of 200 patients.

To me the interesting thing in all this experience, from a professional standpoint, was the extreme value of the postmortem examinations. We had an excellent laboratory under Dr. Krall and the close study of the postmortem material



Base Hospital No. 28, at Limoges, as seen from the hill above the camp and looking toward the city. The cathedral tower is on the other bank of the river (the Vienne).

in our neighborhood were located the training camps for the Coast Artillery Corps and we received from these regiments a goodly number of medical cases due to the epidemic of influenza and other conditions.

Soon after reaching Limoges, Colonel Banister was made commanding officer of the hospital center and Major Milne became our commanding officer. Thus our organization was composed of reserve officers, except for the adjutant who was a sanitary corps man of twenty years' experience. We were kept on duty until February 1, when we were relieved by Base Hospital No. 98. We had started from Kansas City with 25 officers, 153 men, and 100

helped to check up the work of our diagnosticians and give us really valuable help in our other work. We had only 69 deaths, which satisfied us since nearly 10,000 patients passed through our hands. Of the 43 cases going to postmortem that might truly be assigned to the medical service, 32 of them were due to pneumonia, either broncho or lobar. The interesting thing about those pneumonias was that rarely did we have a pure type; the lobar was mixed with the broncho, and the empyema with putrid bronchitis. We had three patients die from meningitis, one from typhoid and one from diphtheria, two primarily as a result of gas, three from tuberculosis, one from endocarditis.

So as far as our hospital was concerned the mortality from gas was not very great; the morbidity, however, was terrific. Most of these men were unfit for further service. Even those we sent back after the Chateau Thierry battles and who were in the Argonne fights were so weakened by their previous intoxication by gas that they probably ought not to have been returned. At least that is the opinion of Lieutenant Kelso, the only officer from our unit who had charge of gas work at the front. He saw several of these men as they came back the second time and in his opinion we really should not have returned them to duty. That shows the efficiency of gas as a means of conducting war.

Perhaps the greatest lesson we bring back with us from our military experience is the feeling that our work here in civil life ought to be more in the hospitals and that our hospitals ought to be conducted along military lines; and that we will be more successful just in proportion as we shall be able to obtain definite and distinct control of the hospitals in our towns and cities. I am inclined to think that even the men who had the good fortune to work in the zone of the advance will agree that if we could introduce more efficient hospital service it would be to the decided advantage of the civilian population of this country.

I think these are a few of the points where our experience differed somewhat from that of Base Hospital No. 21, which has been so eloquently given here.

1317 Rialto Building.

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#### SUGGESTIONS FOR CONDUCTING THE GENITO-URINARY SERVICE AT THE BASE HOSPITAL

ORRIL L. SUGGETT, M.D.  
ST. LOUIS

No department, service or clinic in a cantonment base hospital is as continuously large and crowded as the venereal.

Any plan that will facilitate the efficient handling of such a large number of patients is not out of order.

The conditions and facilities in all the camps are quite similar and the plan here submitted is as adaptable and practicable as these conditions will admit.

In a camp where an entire division is stationed, at least four wards with a possible capacity of one hundred beds each is necessary.

The staff should consist of a chief of service with the rank of major, whose duties are largely executive, except for major operative work

and important consultations; a senior and a junior surgeon for each ward with the rank of captain and lieutenant, respectively, one of the former confining his attention to and being responsible for all the syphilitics and skin cases, and another the genito-urinary cases. For convenience they should be segregated. Of adequate subordinate help in the wards I will speak later but of that required by the chief of service I will say at once, that it should be made plain to the commanding officer that there will be a great deal of clerical work in the department and that sufficient clerks must be provided for the purpose if the work is to be properly done. For keeping records of patients, after a trial of the blank books provided, I was quickly convinced of the superiority of the card index—a complete account of the present case and previous history relevant to it in as condensed form as possible.

The outpatients' cards should be filed separately from those of the inpatients but are so made out that they can easily be changed from one file to the other, merely by making the proper entry with the date of such change. These cards should be made out on the first appearance of the patient for examination or treatment, changes in conditions of patients, or in treatment or disposition of case, added as occasion demands. If undetermined, or for observation, so specify until date of diagnosis, when it is properly entered.

One clerk should become an expert on the Form 55a of the clinical records, so that when the briefs come into the office of the chief en route to the registrar's office he will not have to stop and review them, save in some particular or exceptional case.

The outpatients is the biggest problem with which we have to deal. We found that it simplified matters very much to have all the venereal cases transferred to one or two organizations as soon as a diagnosis was made, where the companies can be arranged by platoons, according to the disease and treatment desired. For instance, the gonorrheal cases can be put in one company and on the days they are to receive their treatment, the whole organization can come, thus doing away with having to deal with twenty or thirty organizations which sometimes are indifferent about cooperating with the department. Then just as soon as a man is ready for duty, make such recommendation to the division surgeon and let him be transferred to another organization. In case there are too many cases to be seen in one day as is generally the case, let them be divided into platoons and come at different times. A similar plan will operate for the syphilitics. When a definite diagnosis is made, immediately request that the



patient be transferred to one of the companies referred to. Divide them into two classes, those awaiting arsphenamine and those requiring mercurial treatment. The last group are able to drill and train almost as vigorously as the men in the regular companies. They attend the clinic for treatment once or twice a week until fit for duty, when you finish his register and send it to his organization commander with this information, on which he will be transferred to another organization. The syphilitic register should not be carried back to the convalescent camp, depot brigade or elsewhere whence the patient comes, but should be kept in one place, preferably in the custody of the officer attending them. These as well as other files should be indexed according to organizations, for ready reference on requested information from their commanders, which comes in many times a day. The ward work should be so arranged that during the hours for the outpatients, the entire staff may be utilized. One officer should act as director of treatment for the new cases presenting, and he should be a man thoroughly qualified and of large experience in this work, obviating the administration to a large number, of some customary routine treatment not based on an accurate diagnosis, useless, ineffectual, sometimes harmful. The treatment should be so apportioned that each man does but one thing, be that prostatic massage, irrigation, deep instillations or dilations. The division and concentration of work suggested so facilitates it that one medical officer was able to administer as high as 150 arsphenamines in one day in our service. In order to equalize the ward work we found it satisfactory to rotate it, one officer attending to all the paper work for two weeks, the other attending to all treatments and dressings. In wards of this size it is absolutely necessary to have an efficient clerk, and not depend on the ward master, as is often done, as his duties are sufficient. No female nurses are provided in the venereal wards, hence it is necessary to have a competent day and night male nurse. Another common error is the utilization of venereal patients for police duty all over the hospital. They are patients similar to those in any other ward and should be so treated. An acute gonorrheic may develop lymphangitis after a day of such work, chancroids will not heal as readily as when at rest, a quiescent epididymitis or prostatitis may flare into activity, and skin lesions in situations where there is friction and perspiration may become intractable, retarding the return of all these men to duty. This rest in bed is highly essential in those cases of purely functional irritability of the bladder so frequent among the recruits unaccustomed to their new conditions,

and may be entirely relieved by rest in bed, dilatations, instillations and urinary sedatives. These cases were somewhat puzzling to us in the beginning owing to the infrequency of enuresis or incontinence in men in civil practice, without some physical cause. Their differentiation from the malingerers of this type is most important. In the office of the chief of service a system of evening reports from the clerk, of all changes of patients in the wards is the best way of keeping track of patients in the hospital.

All laboratory reports should be delivered to this office and recorded on the cards, before appended to the clinical history. It will require the entire time of one clerk to handle these cards, especially if he is charged also with attending to the outpatients' cards, with their numerous smear reports. Of course all outpatients presenting open lesions immediately become ward patients and are there retained until every possible vestige of contagion has disappeared.

Except through deviations necessitated through emergency, the following schedule of work will be found convenient for the office of the chief of service:

Morning devoted to getting out correspondence concerning discharges from the hospital that morning; also all correspondence in connection with the outpatient department. The clerk in charge of the cards will have been busy making proper entries, discharges, notices, treatment and laboratory reports, or anything else that needs recording.

The afternoon is devoted to outpatients. The two clerks will be fully engaged in the making out of operation reports in which arsphenamine administrations are included, and in checking off the names of those who attended the clinic and those who do not that they may be reported to their commanding officer. Above all get a complete record of all that is being done for the man and his progress. Get enough on your card to be able to discuss the man's case understandingly ten years later if occasion demands. Never discharge a man without taking his temperature and pulse and recording it, for, aside from its real value, this will obviate any future discussion as to whether he was duly observed just before leaving the hospital. He will remember a definite though simple procedure like this.

As to the details of the work in each ward, many useful hints suggest themselves to maintain orderliness. Many times it is not convenient to take the histories at once, especially if quite a number arrive at once. After the ward master has registered them in his book and assigned them bed numbers, have him place

their briefs on a Shannon file hung on the wall, labeled: "Histories—Incomplete." After the history is completed and the diagnosis made, place them on a specially made board (from the paper board which is so plentiful around camps), numbered from 1 to 100 in liberal sized type, such as numbers cut from a big calendar, indicating the bed number, for with a large number of patients it is easier to look for a man's number which he always knows, than his name. Two long headless nails the distance apart of the perforations in the record suffice for each one. A string the entire length of the board, across the records midway, will prevent them being blown off.

Cases in which the record is complete but undiagnosed are placed on another Shannon file so labeled. In this way all your records are in one of three places, and not all over the ward or office as often happens. For further convenience your cases may be arranged in groups on the board; those which are acute, with temperature, etc.; or operated cases, requiring attention several times during the day or night; those for daily treatment, and the chronic cases needing bi-weekly treatment, each group being designated by a large, plain letter—A, B, C, etc.—though each case should be seen every day. These little arrangements prevent the frequent handling of the records which actually wears them out or gets them in such condition that they often have to be made over. Rather than the customary pigeon holes in the improvised desk, I prefer classifying my daily work on another smaller wall board above my desk in plain view, as a constant reminder. The reversed side of some of the infrequently used forms may be utilized on separate pairs of nails, each plainly designated above—"Wassermann," "Arsphenamine," "Dark Field," "Urinalysis," "Smears," "Operations," "Consultations," "Chief of Service," "Discharges," "Orders for Night Nurse," etc. The S. C. D.'s may be kept in a pigeon hole so marked. Make a carbon copy of all requests for consultations, special laboratory reports, etc. It protects you in case it is not done promptly. Your first morning duty is to see and treat all bed cases. Then whatever is to be done or recorded of ambulatory cases should be done at one time, preferably at inspection and treatment time, before they get scattered all over the ward and porches or on police duty, if this is permitted. The "progress" and "treatment" sheets, Forms 55 g and 55 j, are best kept in the treatment room by the medical officer administering such, on a Shannon file alphabetically indexed. He should also keep a card index system of his own, placing them in the back, as treated, and

from the remaining ones he can easily tell who have not been treated. An apt, intelligent, and willing patient can be very quickly trained in keeping these cards, and another in keeping everything orderly in your treatment room, cleaning it up afterwards, replacing everything where it belongs and helping in the minor details of the work.

With such a large number of patients it is not at all difficult or impossible to lose one, so to prevent them from "going over the hill," I require my ward master to line them up and call the roll before turning them over to the night man, getting a "receipt" for them, and reversing the process in the morning. The patients requiring them should have separate hand injections, individually labeled and on a shelf in the latrine, rather than the dangerous habit of dipping their syringes into a common container of a large quantity. Large basins of a suitable bichlorid solution should be kept in each latrine, for sterilization of their hands and syringes, in which they have been properly instructed.

For convenience and to avoid delay, a sub-laboratory, as well as a branch dispensary, should be a part of the department, and with such efficient and adequate laboratories as are provided by the department of the surgeon-general, being always available, these should be utilized much oftener than is customary in civil practice. All cystoscopic, urethroscopic, and minor operations should be done in the department, and all operative work by the members of the staff. The wards are not suitably constructed for an outpatient dispensary, requiring local and frequently surgical treatment, but may be made so, under the plans of Major Townsend at Camp Dix (See *Journal A. M. A.*, March 9, 1918).

In conclusion I would earnestly deprecate the plan of assigning to the department, from the chief of service to the junior ward surgeon, men who admittedly know nothing of urological or venereal work. Owing to the large number of men affected, and the disability incident to these conditions, none but men of known and recognized ability for this particular work should be chosen, just as obtains in the ear, nose, throat, and eye, orthopedic, physchiatric, or any other special department. The importance of this necessity cannot be too forcibly impressed on all concerned, as there is a tendency to relegate to this department men who have been tried out every where else and found to be misfits. I know of no other department that demands more proficiency for the actual good of the service.



# THE JOURNAL

OF THE

## Missouri State Medical Association

JULY, 1919

### EDITORIALS

#### DISTRICT POSTGRADUATE MEETINGS

TO COUNCILORS, AND PRESIDENTS AND SECRETARIES OF COMPONENT SOCIETIES

At the Excelsior Springs meeting of the association last May, the council and the secretaries of county societies approved a plan for taking postgraduate work to the members of the county societies. The plan was introduced by Dr. Hamel, councilor of the Twentieth District, who was delegated to confer with the secretaries on the feasibility of the proposition. The secretaries received the suggestion with much enthusiasm. Dr. Hamel's suggestion was that the council establish a system of postgraduate work in the county medical societies to the end that postgraduate and research work may be profitably utilized by the component societies. It is desired that the plan be put into operation this fall so the executive committee of the council at a meeting held at headquarters on June 26, instructed the secretary to announce in *THE JOURNAL* the plans for the work and request the councilors to take hold of the proposition immediately.

The council requests each councilor to call a conference as soon as possible of the presidents and secretaries of all county societies in his district for the purpose of outlining a program for a District Postgraduate Meeting of the county societies in that district, what subjects the members desire discussed by the visiting physicians, the place and time of holding the meeting, and notify the secretary of the state association the result of the meeting.

The council will then arrange to send speakers to the postgraduate meeting who will lecture on the topics stipulated, hold clinics when cases are presented, give laboratory demonstrations, and speak at a public meeting if such a meeting is scheduled.

In districts where hospital facilities are adequate the conferences should be amplified by clinics. In districts where no hospitals are available the council suggests that joint conferences be held with a district in which there are adequate hospital facilities. In the larger cities where hospital and laboratory facilities are abundant, clinic days should be scheduled and

the work thoroughly systematized and bulletined in *THE JOURNAL* of the state association.

It is believed that such a system as outlined above will bring modern medical problems to all members of the state association in a concise and direct manner. It will furthermore give these members who do not have modern library facilities an opportunity to obtain information that would otherwise be denied them. The councilors will be responsible for the conference in each district and the executive committee of the council will have supervision of the undertaking.

Every councilor is urged to get in communication with his county societies as soon as possible and decide on a date for holding a conference with the presidents and secretaries of the county societies. At this conference they will outline a program as mentioned above, for the District Postgraduate Meeting. A chairman and secretary of the initial conference should be chosen and the secretary be instructed to send a complete record of the meeting to the secretary of the state association who will in turn inform the executive committee of the program the district has formulated.

Since we desire to inaugurate this movement early in the fall we hope the councilors will act on this important matter at their very earliest convenience, so the executive committee can be prepared to fill the programs.

#### POLITICS AND STATE HOSPITALS—AGAIN

Our state hospitals continue to be a source of unpleasant publicity and the medical profession is inevitably involved in the squabble. These institutions will never cease to be a disturbing factor in the orderly conduct of the affairs of the state so long as their management remains in the hands of persons whose appointment depends on political influence. No one, from the governor down to the lowest menial in the institutions, can escape serious perturbation every time some one takes it into his head to "raise Cain," with a corresponding disregard for the welfare of the inmates. Everybody is disgusted with the conditions except those who have a job, those who are looking for a job, or those who are trying to get a job for a "constituent."

Public opinion long ago condemned the political system now in vogue and Governor Gardner made an effort in the Forty-Ninth General Assembly to establish a central board of control for the management of these institutions. Our association labored industriously to secure the passage of that bill, but its fate was sealed when the political leaders turned against it in

the closing days of the session. The disturbed conditions due to the war and the desire to obtain more definite knowledge of the mentally deficient population of the state and their environment induced us to refrain from introducing a similar bill in the Fiftieth General Assembly, so the present state of affairs must continue two years longer. In the meantime, however, we believe public opinion will become so definitely settled against political control of these institutions that the Fifty-First General Assembly will place a competent law on the statute books for an intelligent and modern method of managing the institutions for the sick and afflicted wards of the state.

The recent imbroglio at Nevada revived a two year old fight on the superintendent of State Hospital No. 3, who managed to hold his position through a fluke until the term of his supporters on the board of managers had expired; then came charges, threats, withdrawal of charges, resignation of the superintendent, appointment of the original nominee—silence. This discord has given the people another nasty experience and forced all forward-looking persons to hang their heads in shame.

The capabilities of the contending candidates to fill the position they sought is not a subject for discussion at this time. Under the present law they need no professional training in nervous or mental diseases. They need only training with the controlling political bosses. It is that relic of the dark ages that we seek to cast on the political dung heap. That the people are tired of the periodical fights for political control of the state hospitals is evidenced by the numerous articles in the newspapers condemning the system. Here is what the *St. Louis Republic* said recently:

The prolonged and complicated squabble in which the affairs of the State Hospital at Nevada have been involved is doubtless a very interesting thing to those who have taken part in it. They have been showing great concern to let the people in on all of the facts, but we doubt if the people really care very much about minutia of the affair.

Their concern is, or ought to be, with the fact that affairs of any of the state's eleemosynary institutions may become involved in similar factional quarrels just as long as the appointing authorities consult with political bosses about who should have the jobs. What does a county boss know about the qualification of an alienist? Nothing, of course, and yet the alienists in charge of the unfortunate inmates of Missouri's insane asylums get their places through political backing, and lose them when some other man develops a stronger political pull.

The ailing and unhappy people confined in those institutions are entitled to the most intelligent care that the state can secure for them, and any system which tends to lower the average learning and ability of the superintendents does them a monstrous injustice.

The political system of appointments has exactly that tendency, because it measures candidates for those positions by some other standard than pure effi-

ciency. Moreover, the political system deters the best men from accepting superintendencies because the places are insecure. A first-rate physician who has specialized in insanity is not likely to make himself a political football.

The practice which is followed in the schools and universities is the one that should be followed in the asylums. The superintendent of any asylum ought to be as secure in his place as the superintendent of the schools of St. Louis is, and ought to be chosen in the same way. Appointments should be for merit and the tenure should depend on proved fitness.

Other newspapers have spoken editorially against the political management of these institutions. We believe that our association can secure the earnest cooperation of intelligent laymen during the next two years so that a law will be passed in 1921 establishing a central board of control for the state hospitals. Under such arrangement the superintendent would hold his position during good behavior and competency. The institutions would then become training schools for young men desiring to study the specialty and develop a scientific atmosphere that would reflect great credit on our state and our profession instead of being a foot ball for the "bosses."

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#### "ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY"

The Council on Pharmacy and Chemistry of the American Medical Association is a department of our national organization that has not received the plaudits and encomiums of a wildly joyous medical profession nor the grateful praises of the enthusiastic manufacturer of pharmaceuticals. The council seems indeed to be the unloved child of the entire family of subsidiary bodies of the association. Perhaps the reason for this may be found in the character of its duties for the council must expose fraud, sometimes in high places, and protect the physician from being duped by avaricious persons and by persons who are themselves sometimes the victims of their own credulity. It thus happens that the sale of some proprietary article previously held in high esteem by the practitioner proves valueless, perhaps even fraudulent. The practitioner, however, may have credited much of his success in treating certain conditions to that preparation and the maker has had success in accumulating dollars from its sale and both parties emit a loud and vicious roar against the council, because they both lose money. Nobody wants to be "protected" against making money—make it honestly if possible, but make it—but this black sheep among the Councils of the American Medical Association insists on their making their money honestly!



Despite many obstacles thrown into its path, the Council on Pharmacy and Chemistry has serenely pursued its allotted tasks, corrected its mistakes, improved its methods, and today stands as the only medium to which the honest physician may turn for information—not misinformation—regarding proprietary articles. During the war the council and the chemical laboratory were in close cooperation with the Surgeon-General's Office, testing and investigating every article offered to the government for the treatment of the sick soldiers. The variety and the number of fakish and fraudulent stuff offered to the Surgeon-General was a pitiable exhibit of the mental gymnastics of some people. Just now the council and the laboratory have a new and important field before them, i. e., to protect the physicians against worthless and useless serums, vaccines and synthetics. It will be the council's unpleasant duty to expose the fraudulent and useless among these articles and stamp truth on those found worthy.

We seem to have wandered from the topic in our caption but not so in reality because the burden of our thought is to lend our influence to the spread of the motto of the Advertising Clubs of the World, namely, "Truth in Advertising." It is our purpose to stimulate a larger degree of enthusiasm for the work of the Council on Pharmacy and Chemistry and the Chemical Laboratory, a more generous flow of inquiries concerning articles unfamiliar to the physician, and particularly to urge that the words "accepted by the Council on Pharmacy and Chemistry of the American Medical Association" be printed on the label and on all advertising circulars of proprietary articles that have been admitted to New and Nonofficial Remedies. Then, when pamphlets and circulars are received by physicians they will read the statements of manufacturers with sympathetic understanding and with full confidence in the verity of the declarations. The importance of creating just that sort of receptivity in the mind of the prospective buyer is so well known to the astute publicity expert that it is needless for us to dwell on its advantages. Every proprietary article advertised in our JOURNAL, in *The Journal of the American Medical Association*, and in the other state association journals, as well as in several well edited privately owned journals, does in effect say to the reader that the articles so advertised are accepted by the council because only proprietary articles so accepted are accepted by us. The fact is further acknowledged when these firms are permitted to exhibit their goods at our annual sessions for again the rule is enforced that only proprietary articles which have been approved by the council may be placed on display.

Why not complete the circle of ideas—it would not be a "vicious circle"—by printing on labels, in advertisements and circulars, the words: "Accepted by the Council on Pharmacy and Chemistry"?

### AN AMERICAN HOSPITAL AND POSTGRADUATE SCHOOL OF MEDICINE IN LONDON

In the proceedings of the House of Delegates of the American Medical Association at the Atlantic City session in June, one of the delegates from the medical profession of Great Britain presented a proposition that holds the most promising outlook for the future relations between the medical profession of the two nations. The communication proposes the erection in London of a \$5,000,000 hospital and postgraduate school, built especially for the use and benefit of American physicians. We learned that this proposition had been submitted to the American Medical Association when we found it published in *The Journal of the American Medical Association* of June 21. The various purposes covered in the proposition are of exceeding interest and importance to our members and thinking that the communication might not come otherwise to the notice of some of our readers we re-publish it in full. The communication, which follows, was referred to the Council on Medical Education:

It is with deep interest and gratification that the members of the American Medical Association learn of the project to establish and maintain in the city of London, England, an American hospital and postgraduate school, the school for physicians of America who desire to take advantage of the wealth of clinical material which London affords, and the hospital in part for American citizens who may become ill while abroad.

The institution is to be built by American residents of London. The project, which originated with Mr. Franklin, an American surgeon who is attached to the Middlesex Hospital in London, is largely in the hands of Mr. Newton Crane, of the American Embassy, and of Mr. Van Duzer, who guarantee that ample funds will be provided for the purpose. The sum of £1,000,000 has been suggested.

Lord Reading has been elected president and has suggested a lay committee comprising all of the most prominent men in England. A corresponding list of prominent Americans is being selected. Hon. William H. Taft, ex-President of the United States, has been approached in reference to his acceptance of the presidency on this side of the ocean.

The medical contingent of the British committee consists of Sir Humphrey Robertson, Sir William Osler, Sir John Bland Sutton and Sir Arbuthnot Lane.

It is proposed that the plan comprise three integral parts:

1. A private home or hospital for Americans abroad.
2. A nonpaying clinical portion of from 100 to 200 beds.

3. The major portion of the building to consist of a home for the American Medical Association. This will comprise lecture room, theater, library, laboratories, and all necessary equipment, and facilities for postgraduate study and research. The clinical and other materials which Great Britain affords for study and research will be at the disposal of American physicians who attend the school.

Among the objects of the plan are the development of friendly competition in research in the field of the medical sciences, and the welding of the two English-speaking nations into one body.

It is learned that it is the desire of the men in England that the American Medical Association should formulate concrete ideas for the development of this project, and that the association cooperate with the British committee in bringing about its consummation.

Be it therefore,

*Resolved*, That this matter be referred to the Council on Medical Education with instructions to report to the Board of Trustees some plan of effective cooperation of the American Medical Association with the British committee in charge of the American postgraduate medical school and hospital of London.

### THE MISSOURI HEALTH CONFERENCE

The first session of the Missouri Health Conference, which convened at Springfield May 29 to June 1, was a very noticeable outcropping of a propaganda along the lines of better babies, better health for the masses, and better living, alongside of our prize mules and adipose pigs.

Springfield impressed the visitor with its eternal fitness for a health convention; its California climate, mountain breezes that are not too stiff but just stiff enough, its breadth of public spirit, and its municipal hospitality, all go to satisfy both the mind and body of the visitor.

The work of the conference visibly centered on that ancient enemy of mankind—tuberculosis. Education of the people and state supervision of the afflicted were heralded from the lips of every speaker. The curability of the disease was demonstrated beyond a doubt, if taken in time, with enforced rest and outdoor air. No compromise can be permitted in dealing with this disease.

A sumptuous banquet was spread in the halls of the Chamber of Commerce which left nothing to be desired. Free theatrical entertainments, and drives about this historic region did much to relieve the soul of the worker.

The program was rich with brain food although many who had promised to supply the mental papulum failed to appear and the attendance as a whole was disappointing. Nevertheless the conference is a good thing and should be pushed along. It is an incentive to better things human and in this great era of national prosperity we must constantly emphasize the need of sound bodies for the abodes of sound minds.

## OBITUARY

THOMAS W. CHILTON, M.D.

The Reynolds County Medical Society adopted the following report of a committee appointed to submit resolutions on the death of Dr. Thomas W. Chilton:

Dr. T. W. Chilton was born near Eminence, Shannon County, Dec. 27, 1874, and died March 20, 1919, at the Missouri Baptist Sanitarium, St. Louis, after an illness of six days, the primary cause of his death probably being influenza.

Dr. Chilton was a graduate of Mountain Grove (Mo.) Academy, Barnes Medical College and had a degree of Master of Surgery from the National University of Arts and Sciences, St. Louis.

He was a member of the Baptist church at Ellington, member of the Reynolds County Medical Society and Missouri State Medical Association, also member of the I. O. O. F. Lodge No. 455.

Dr. Chilton was a busy practitioner of pleasing personality, always attended the medical societies, was an affectionate husband and father, and a respected citizen.

*Resolved*, That we deeply deplore the untimely death of our brother and co-worker, and be it further

*Resolved*, That in his death the medical profession has lost a devoted and untiring member; that the community has lost a splendid citizen, and that in token of our esteem for him, these resolutions be incorporated in the minutes of our society, and a copy sent to THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION, also a copy presented to his wife.

J. A. CHILTON,  
A. F. BUGG,  
J. R. PYRTLE,  
*Committee.*

W. C. BAIRD, M.D., ELLA T. COLBY,  
M.D., M. W. CRATON, M.D.

The medical profession of Carroll County has recently been invaded by the Grim Reaper and three physicians who have long enjoyed the respect, confidence and esteem of the people in that community have been gathered to their fathers. In respect to their memory the Carroll County Medical Society appointed a committee to draft resolutions of sympathy and condolence with the families of the deceased physicians. The resolutions follow:

W. C. BAIRD, M.D.

WHEREAS, It has pleased our Heavenly Father to remove from our presence our most revered and respected co-worker, Dr. W. C. Baird of Bogard; therefore be it

*Resolved*, That we deeply deplore the death of our beloved brother; and be it further



*Resolved*, That in his death the medical profession has lost one of its most loyal and respected members, one of the oldest members of the Carroll County Medical Society and for many years president of the society and a highly respected citizen, and in token of our esteem for our fellow member, these resolutions be incorporated in the minutes of our society, a copy be sent to THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION, a copy be published in the local papers, and a copy be sent to the wife of Dr. Baird.

W. G. ATWOOD,  
J. LYNN SAMUELS,  
E. E. BRUNNER,

*Committee.*

ELLA T. COLBY, M.D.

WHEREAS, It has pleased our Heavenly Father to remove from our midst Dr. Ella T. Colby of Roads, an honored and faithful member of the Carroll County Medical Society; therefore be it

*Resolved*, That we deeply deplore the death of our member and co-worker; and be it further

*Resolved*, That in her death the community has lost one of its faithful and most energetic workers, and the medical profession one of its most loyal and respected members; and be it further

*Resolved*, That in token and esteem of friendship which we have for our fellow-member, these resolutions be spread on the minutes of our society, that a copy be sent to the bereaved husband, Dr. Colby, a copy be sent to the local papers of the county and one to THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION.

W. G. ATWOOD,  
J. LYNN SAMUELS,  
E. E. BRUNNER,

*Committee.*

M. W. CRATON, M.D.

WHEREAS, It has pleased our Heavenly Father to remove from our midst Dr. M. W. Craton of Carrollton; therefore be it

*Resolved*, That we deeply deplore the death of our co-worker in our community;

*Resolved*, That in his death the community has lost one of its energetic and faithful workers, and the medical profession one of its most respected and loyal members; and be it further

*Resolved*, That in token of the esteem and friendship in which we held Dr. Craton these resolutions be sent to the local papers, a copy be sent to the bereaved family, and a copy to THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION, also a copy be spread on the minutes of our county society.

W. G. ATWOOD,  
J. LYNN SAMUELS,  
E. E. BRUNNER,

*Committee.*

## NEWS NOTES

DR. W. M. GIRDNER of Chillicothe has been appointed president of the board of health of that city.

DR. JOHN W. GOOD of Fordland was operated on at the Springfield Hospital in Springfield, June 14, for complications resulting from injuries received a year ago.

DR. S. W. CHANDLER of Cassville was elected president of the Southwest Missouri Medical Society.

MANY physicians are finding congenial and profitable associations by entering the United States Public Health Service.

THE federal government allotted \$35,808 to the Missouri State Board of Health in the campaign against venereal diseases.

"DOCTOR" LOUIS TREMONTI of Kansas City has been charged with practicing medicine without a license and prosecution begun.

SPRINGFIELD has adopted a new milk ordinance which Dr. Spurgeon, the city bacteriologist, says will give Springfield a better grade of milk.

DR. W. B. SISSON of Kahoka, a member of the Clark County Medical Society, has accepted a position with the American Red Cross to go to Siberia, where he will engage in Red Cross work.

DURING May the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Abbott Laboratories: Liquor Hypophysis, U. S. P. Abbott; Procaine Hypodermic Tablets,  $\frac{3}{4}$  grain; Procaine-Adrenalin Hypodermic Tablets-Abbott.

Gilliland Laboratories: Antimeningococcic Serum (Combined Type) (Gilliland); Diphtheria Antitoxin, Concentrated and Refined; Tetanus Antitoxin, Concentrated and Refined; Antipneumococcus Serum Type I; Smallpox Vaccine; Original Tuberculin "O. T."

E. R. Squibb and Sons: Protargentum-Squibb.

THE Missouri Association for Occupational Therapy organized in St. Louis has incorporated to teach occupational therapy as an aid in the reconstruction of disabled soldiers and persons injured in industrial establishments. Dr. G. Canby Robinson, St. Louis, Dean of Washington University Medical School, is president of the association.

At the Atlantic City meeting of the American Medical Association, June 9, Missouri Fellows were elected officers of sections as follows: Practice of Medicine: Dr. G. Canby Robinson, Dean Washington University Medical School, St. Louis, secretary. Surgery, General and Abdominal: Dr. Malvern B. Clopton, St. Louis, vice chairman. Obstetrics, Gynecology and Abdominal Surgery: Dr. Francis Reder, St. Louis.

vice chairman. Stomatology: Dr. Vilray P. Blair, St. Louis, chairman. Gastro-Enterology and Proctology: Dr. H. W. Soper, St. Louis, secretary (reelected).

As announced in our correspondence columns the Missouri State Board of Health has found it necessary to abandon the laboratory division because the legislature failed to appropriate any funds for its maintenance. In this quandary the state university has come to the rescue of the board and enlarged its laboratory facilities in the department of preventive medicine to continue the service to the people that the board of health labored strenuously to render despite the lack of sufficient funds, and will continue the work previously done by the state board of health laboratory.

DR. EVARTS A. GRAHAM, Chicago, has accepted the position of professor of surgery, Washington University Medical School, to succeed Dr. Fred T. Murphy, who resigned not long after his return from Army service. Dr. Graham is a graduate of Princeton and obtained his medical degree from the Rush Medical College in 1907. He has been on the faculty of the Rush Medical College for a number of years and is the author of numerous papers on surgical subjects. He will be the head of the department of surgery and have charge of that service in the Barnes Hospital and Children's Hospital. No announcement has been made of Dr. Murphy's subsequent affiliations.

## MEMBERSHIP CHANGES

### NEW MEMBERS

Ambrose, Elmer Cleo, St. Joseph.  
 Andrews, John, Grant City.  
 Barnum, K. R., Sedalia.  
 Bristow, Arthur Shaw, Princeton.  
 Elder, John T., Lamonte.  
 Hatton, Ossian Forest, Darksville.  
 Hodam, J. A., Excelsior Springs.  
 Holt, Alonzo T., Dunlap.  
 Hummel, Louis George, Springfield.  
 Montgomery, James Gordon, Kansas City.  
 Montgomery, William E., Kansas City.  
 Roberts, John C., Boynton.  
 Schwein, Bertha O., Kansas City.  
 Staats, Ethan F., Sedalia.  
 Valentine, Herbert S., Kansas City.  
 Wilson, Virgil Randol, St. Joseph.

### CHANGES OF ADDRESS

Abramopoulos, Christos, 744 Lathrop Bldg., Kansas City, to 725 Harrison St., San Francisco, Calif.  
 Albers, E. A., 4025 Main St., Kansas City, to 638 Lathrop Bldg.

Bedal, A. C., 758 Clara Ave., St. Louis, to 4132 Castleman Ave.

Bradley, W. P., Nevada to Windsor.

Buddy, E. P., 229 Frisco Bldg., St. Louis, to 409 University Club Bldg.

Callaway, Luther M., 424 E. Strong St., Pensacola, Fla., to 515 Chambers Bldg., Kansas City.

Castelaw, Rush E., Wesley Hospital, Kansas City, to Puntun Sanitarium.

Cerny, George, 1405 N. Grand Ave., St. Louis, to 4321 Delmar Ave.

Clausen, J. J., 1321 Rialto Bldg., Kansas City, to 3933 Forest.

Clendening, Logan, 1025 Rialto Bldg., Kansas City, to 310 Rialto Bldg.

Cooley, Edward L., 933 Hamilton Ave., St. Louis, to 1514 Chemical Bldg.

Cunningham, O. J., 638 Lathrop Bldg., Kansas City, to 807 Waldheim Bldg.

Edmundson, J. Phil, 1300 E. Fourteenth St., Kansas City, to 211 New Center Bldg.

Ehrhardt, R. T., 3610 Washington Ave., St. Louis, to University Club Bldg.

Ellery, W. L., 2725 Washington Ave., St. Louis, to La Grange.

Evans, E. J. E., 3917 Broadway, Kansas City, to 738 Lathrop Bldg.

Flury, John A., 520 Metropolitan Bldg., St. Louis, to 501 Humboldt Bldg.

Fortune, Daniel, Clarksville to Kilgore, Ky.

Goodman, Samuel, Argyle Bldg., Kansas City, to 1811 E. Thirty-Fifth St.

Hall, E. P., Rialto Bldg., Kansas City, to 702 Waldheim Bldg.

Harrington, W. W., 1328 E. Thirtieth St., Kansas City, to 404 Bryant Bldg.

Hayman, A. T., 418 Mermod Jaccard Bldg., St. Louis, to 202 Commercial Bldg.

Hayward, J. D., 5560 Maple Ave., St. Louis, to 107 St. Louis Ave., Clayton.

Hearst, Allen L., 3215 Roberts St., Kansas City, to 738 Lathrop Bldg.

Henske, Andrew C., West St. Louis Trust Bldg., St. Louis, to 316 University Club Bldg.

Hiller, Frank B., Pinckneyville, Ill., to Thirty-First and Troost, Kansas City, Mo. (To correct error in May JOURNAL.)

Hoxie, George H., 3719 Penn., Kansas City, to 1316 Rialto Bldg.

Koenig, O. M., 1243 Blackstone, St. Louis, to 5721 Enright.

Marchildon, John W., 308 Humboldt Bldg., St. Louis, to 715 University Club Bldg.

Mark, Ernest G., 626 Lathrop Bldg., Kansas City, to 1010 Rialto Bldg.

McGuire, Clarence A., 638 Lathrop Bldg., Kansas City, to 829 Rialto Bldg.



Ockerblad, Nelse F., 807 Waldheim Bldg., Kansas City, to 416 Argyle Bldg.

Potter, W. A., Lancaster, to 4248 W. Pine St., St. Louis.

Price, C. C., 713 Lathrop Bldg., Kansas City, to 512 Commerce Bldg.

Ravold, Amand, 1208 Chemical Bldg., St. Louis, to 636 University Club Bldg.

Schauffler, Robert McE., 406 Waldheim Bldg., Kansas City, to 416 Argyle.

Skinner, John O., 703 Lathrop Bldg., Kansas City, to 610 Lathrop Bldg.

Smith, Delbert O., General Hospital, Kansas City, to 738 Lathrop Bldg.

Tidwell, G. W., Elvins to Sedalia.

Tinsley, James H., Cleveland to Merwin.

Tuttle, F. W., Mt. Leonard to Blue Springs.

Veeder, B. S., 800 Security Bldg., St. Louis, to University Club.

#### TRANSFERRED

Berry, A. C., Unionville, from Putnam County Medical Society, to Chicago, Ill., Medical Society.

Carrier, C. H., Des Moines, Iowa, from Putnam County Medical Society, to Iowa State Medical Society.

#### DROPPED

Fowlston, John, Kansas City.

Guffey, Don Carlos, Kansas City.

Krimminger, Charles E., Independence.

Wood, James F., Los Angeles, Calif.

#### DECEASED

Campbell, W. L., Kansas City.

Chilton, T. W., Ellington.

Crowell, H. C., Dodson.

## CORRESPONDENCE

### HEALTH OF ASIATICS IN THE WAR

ST. LOUIS, June 9, 1919.

*To the Editor:*—In *The Journal of the American Medical Association* of June 7, editorial comment is made on the health of the Army, and mortality statistics of the American military forces are added which show remarkable efficiency by the Army medical service in overcoming many serious diseases; and it is most gratifying to know that a similar degree of professional excellence was found in the chief countries with whom this nation was associated in the war.

Lately, in casually looking through a new book, "The Indian Corps in France," by Merewether and Smith, I found testimony to this effect; and, as the authors were not in the medical service, it has every appearance of being unbiased and valuable. They say:

"It was feared that the rapid transition from the warm, dry climate of India to the cold and damp of Flanders would lead to a great increase of sickness among the troops, both British and Indian. These fears happily proved to be unfounded. . . ."

"The work of the medical branch of the service is not one which comes very prominently into the limelight. Its chief reward is found in the admiration and gratitude of the troops over whose health and general well-being the medical officers keep such careful watch.

"It was expected that pulmonary affections, such as pneumonia and bronchitis, would be common, but these, as well as malaria and dysentery, were rare, while gastric diseases due to changes of food and water were almost unknown."

The authors, who seem to speak advisedly, add that influenza and trench fever occurred among the Asiatics in much the same proportion as among the British, but that the latter suffered to a considerable degree from albuminuria while the Indians were practically free from that new malady of the trench.

The foregoing statements appear to be officially true, and while they may be well known abroad, even in civilian circles, still the achievement was so remarkable that it should be more generally known—the difficulty in dealing with the Asiatic troops being increased by their widely varying forms of religious belief, and the absolute necessity of scrupulous care respecting their rationing, cooking, and the like, so as to give no offense to racial, religious or national customs and prejudices.

GEORGE HOMAN, M.D.

Odd Fellows Building.

### BOARD OF HEALTH LABORATORY TRANSFERRED TO STATE UNIVERSITY

JEFFERSON CITY, Mo.

*To the Editor:*—We regret to inform you that the state board of health has found it necessary to discontinue their laboratory at this place.

The legislature of 1917 failed to make sufficient appropriation to properly conduct this division. It was conducted in the best possible manner awaiting a future appropriation, but the last session of the legislature, which just closed, failed to make any appropriation for a personnel to carry on the laboratory work.

We have, therefore, made arrangements with the Department of Preventive Medicine, State University, Columbia, Mo., to make such routine examinations of a public health nature as we have in the past conducted, and to whom

we would ask that you send work of this nature in the future. I am sure you will receive from them the best possible service and we will appreciate in their behalf a continuance of the courtesies you have extended to us in the past.

We are: Very truly yours,

MISSOURI STATE BOARD OF HEALTH,

George H. Jones, M.D., Secretary.

## MISCELLANY

### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY

Aull, J., Kansas City.

Bailey, Fred W., St. Louis; Belshe, George W., Trenton; Bosserman, D. C., St. Louis; Brickley, P. A., St. Louis; Burdick, C. H., St. Louis.

Calloway, L. M., Kansas City; Cobb, B. E., Lemons; Cochran, J. H., Gideon; Coffey, G. C., Platte City; Cooley, E. L., St. Louis; Coughlin, W. T., St. Louis; Crossen, H. S., St. Louis.

Dagg, G. R., North Kansas City; Dearing, B. F., St. Louis; Denman, J. I., Kansas City (Navy); Den-slow, F. M., Kansas City; Dorsett, E. Lee, St. Louis.

Elliott, J. R., Kansas City; Englemann, O. R., St. Louis; Ernst, E. C., St. Louis; Evans, R. A., Caines-ville; Eyermann, C. H., Sullivan.

Fisher, R. F., St. Louis; Fitzporter, A. L., St. Louis; Forstot, S., St. Joseph.

Gilbert, W. W., St. Louis; Goldman, M., Kansas City; Gradwohl, R. B. H., St. Louis (Navy).

Hedrick, H. B., Kansas City; Henderson, J. P., Kansas City; Hibbard, S. B., Kansas City; Holt, S. W., Rutledge; Hopkins, C. B., Kansas City; Hoxie, G. H., Kansas City.

Kerley, G. L., Kansas City; Kopelowitz, J. C., St. Louis; Kleinschmidt, H. E., St. Louis; Krall, P. M., Kansas City.

LaRue, F., Dexter; La Rue, H. M., Kansas City; Lavan, J. L., St. Louis (Navy); Lehman, E. P., St. Louis; Leslie, J. F., Barnett; Lewald, J., St. Louis; Locker, G. E., Iantha; Logan, James A., Warsaw; Lowe, H. A., Springfield.

Mabry, P. S., Rocheport; McCulloch, H., St. Louis; McFadden, J. F., St. Louis; McGuire, C. A., Kansas City; McKay, J. C., Kennett; Milne, Lindsay S., Kansas City; Missimore, L. E., St. Louis; Mook, William H., St. Louis; Moore, H. M., St. Louis.

Owens, M. J., Kansas City.

Patton, W. G., Framington; Payne, R. J., St. Louis; Perry, John M., Princeton; Pickrell, C. D., St. Louis; Potts, J. M., Springfield.

Ragan, S. T., Moberly; Rawhauser, J. L., Green-field; Reilly, W. S., St. Louis; Ross, P. J., Grant City; Ryland, C. T., Lexington.

Shelton, W. A., Kansas City; Skinner, E. H., Kansas City; Smith, W. I., St. Louis; Snider, S. H., Kansas City; Stewart, J. E., St. Louis; Strauss, A. E., St. Louis.

Taylor, Herbert I., St. Louis; Tormey, A. R., St. Louis; Turek, A. E., St. Louis.

Veeder, B. S., St. Louis; Vinyard, R., St. Louis.

Weaver, J. S., Kansas City; Welch, H. W., St. Louis; Westlake, S. B., St. Louis; Wheeler, William, Sedalia; Williams, J. R., Kansas City; Wittwer, E. C., Mountain Grove; Wood, A. M., Lentner.

Young, Anthony O., St. Louis; Young, W. B., St. Louis.

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1919

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH  
HAVE PAID THE STATE ASSESSMENT FOR  
ALL THEIR MEMBERS)

Madison County Medical Society, Dec. 14, 1918.

Webster County Medical Society, Dec. 23, 1918.

Cedar County Medical Society, Dec. 30, 1918.

Pike County Medical Society, Jan. 8, 1919.

Vernon County Medical Society, Jan. 20, 1919.

Chariton County Medical Society, Jan. 25, 1919.

Wayne County Medical Society, Feb. 12, 1919.

Camden County Medical Society, Feb. 14, 1919.

Atchinson County Medical Society, Feb. 26, 1919.

Ralls County Medical Society, Feb. 27, 1919.

Ste. Genevieve County Medical Society, Feb. 27, 1919.

Nodaway County Medical Society, March 24, 1919.

Laclede County Medical Society, March 31, 1919.

Oregon County Medical Society, April 7, 1919.

Cass County Medical Society, April 16, 1919.

Adair County Medical Society, April 17, 1919.

Cape Girardeau County Medical Society, May 8, 1919.

Newton County Medical Society, May 12, 1919.

## Missouri State Medical Association

Sixty-Second Annual Meeting, held at  
Excelsior Springs, May 26, 27, 28, 1919

### MINUTES OF THE HOUSE OF DELEGATES Elms Hotel

#### Monday, May 26, 1919—Morning Session

The House of Delegates of the Sixty-Second Annual Meeting was called to order at 9:40 a. m., May 26, 1919, in the Ball Room of the Elms Hotel, Excelsior Springs, by the president, Dr. M. P. Overholser of Harrisonville. The following delegates were present:

<i>County</i>	<i>Delegate</i>
Atchison.....	A. McMichael, Rockport
Audrain.....	R. W. Berrey, Mexico
Barton.....	A. B. Stone, Lamar
Boone.....	J. E. Thornton, Columbia
Buchanan.....	J. F. Owens, St. Joseph
Buchanan.....	H. S. Forgrave, St. Joseph
Callaway.....	Hermon S. Major, Fulton
Carroll.....	R. F. Cook, Carrollton
Carter-Shannon.....	T. W. Cotton, Van Buren
Cedar.....	R. O. Crawford, Eldorado Springs
Chariton.....	J. F. Welch, Salisbury
Clay.....	F. H. Matthews, Liberty
Daviess.....	N. M. Wetzel, Jameson
Dekalb.....	L. E. Saunders, Stewartville
Dunklin.....	Paul Baldwin, Kennett
Gasconade-Maries-Osage.....	J. D. Seba, Bland
Greene.....	T. A. Coffelt, Springfield
Grundy.....	H. L. Lowry, Trenton
Holt.....	J. F. Chandler, Oregon
Howard.....	V. Q. Bonham, Fayette
Howell.....	H. C. Shuttee, West Plains
Jackson.....	F. E. Murphy, Kansas City
Jackson.....	B. A. Poorman, Kansas City
Jackson.....	R. T. Sloan, Kansas City
Jackson.....	R. E. Castelaw, Kansas City
Jackson.....	S. P. Child, Kansas City
Jackson.....	J. M. Frankenburger, Kansas City



Jackson.....	J. N. Jackson, Kansas City
Jackson.....	F. C. Neff, Kansas City
Jasper.....	A. B. Clark, Joplin
Johnson.....	L. J. Schofield, Warrensburg
Laclede.....	J. M. Billings, Lebanon
Lafayette.....	W. A. Braecklein, Higginsville
Lawrence-Stone.....	H. L. Kerr, Crane
Linn.....	J. B. Scott, Marceline
Livingston.....	R. Barney, Chillicothe
Macon.....	F. W. Allen, Callao
Madison.....	W. H. Barron, Mine La Motte
Marion.....	J. J. Bourn, Hannibal
Miller.....	W. L. Allee, Eldon
Moniteau.....	H. C. Freudenberger, Clarksburg
Nodaway.....	F. R. Anthony, Maryville
Pettis.....	M. P. Shy, Sedalia
Phelps.....	S. L. Baysinger, Rolla
Pike.....	T. Guy Hetherlin, Louisiana
Platte.....	H. M. Clark, Platte City
Pulaski.....	E. A. Oliver, Richland
Putnam.....	L. L. Gray, Unionville
Randolph.....	F. L. McCormick, Moberly
Ray.....	R. Sheetz, Orrick
Saline.....	T. B. Hall, Marshall
St. Francois.....	G. E. Cecil, Flat River
St. Louis City.....	M. A. Bliss, St. Louis
St. Louis City.....	Joseph Grindon, St. Louis
St. Louis City.....	C. H. Neilson, St. Louis
St. Louis City.....	Elsworth Smith, St. Louis
St. Louis City.....	William Engelbach, St. Louis
St. Louis City.....	F. R. Fry, St. Louis
St. Louis City.....	E. Schisler, St. Louis
St. Louis City.....	W. H. Vogt, St. Louis
St. Louis City.....	J. Y. Brown, St. Louis
St. Louis City.....	W. C. Gayler, St. Louis
St. Louis City.....	J. C. Lyter, St. Louis
St. Louis City.....	R. S. Vitt, St. Louis
St. Louis County.....	G. C. Eggers, Clayton
Schuyler.....	J. H. Keller, Lancaster
Sullivan.....	E. S. Porter, Milan
Vernon.....	T. B. M. Craig, Nevada
Webster.....	W. J. Rabenau, Fordland

Dr. Grindon moved that the minutes of the Sixty-first Annual Session be approved as published in THE JOURNAL. Seconded and carried.

The first vice president, Dr. J. D. Brummall, then took the chair.

The president, Dr. M. P. Overholser, read his message to the House of Delegates as follows:

#### PRESIDENT'S MESSAGE

*To the House of Delegates of the Missouri Medical Association:*

During the period of my incumbency as your president the most momentous war in the history of the world has been brought to a close with our armies victorious. During the year and a half that our country was involved in this struggle the members of our association were drawn on to the extent of one-third of its numerical strength to supply the demands of the military forces of the country, while those who remained at home were drafted by the government to perform duties that only physicians can discharge in the mobilization of the Army and at the same time care for the sick and afflicted civil population. Pestilence added to our burdens when the epidemic of influenza swept the country and destroyed over 300,000 lives, among whom were many of the most faithful members of the medical profession. Under these conditions, which were so disorganizing to the established order of affairs, you will not be surprised when I tell you that the work of some of the county societies was interrupted and that in the midst of the epidemic there was for a short period a complete cessation of society activities. But you will be pleased to know that our association has not faltered nor

wavered in its loyalty to the government, its duty to the people nor its obligations to its members throughout the entire period of stress and turmoil that saw our country embroiled in the turbulence of a world war.

Just a year ago our members were flocking to the colors, eager to don the khaki and fly to the succor of the wounded soldiers and the sick and afflicted people in the war torn countries of Europe. Today they are returning to their homes bringing with them the gratitude of the nations, honored by the world, and by their courage and devotion to duty and their brilliant achievements they have reflected on American medicine a glory that shall never die. They are coming back to their homes, to their duties, and to their state and county organizations ready to resume their places in the ranks of the profession and build their organization even firmer and stronger than it has ever been in the past. The loyalty of our members to the Missouri State Medical Association as well as their loyalty to their country is a cause of profound satisfaction to us and evinces more surely than any other circumstance could show us, that our cause as a medical organization is a righteous one and that it has taken root in the heart of the noblest among us and will always receive their support.

Our numerical strength has been well maintained during the war period, due largely to the loyalty and devotion of the county societies, for most of them adopted the rule to pay the state assessments of their members in the service which the House of Delegates proposed to them at the last session.

Our treasury is in a very satisfactory condition, which is also a cause for gratification, and I would suggest that you carefully conserve the finances of the association, realizing that an organization is most useful when provided with sufficient working funds.

Our JOURNAL has appeared regularly during the disturbed period of the war and although somewhat affected in regard to advertising income it has maintained the strict standard of ethical advertisements that we established when we undertook to publish it ourselves nine years ago.

Notwithstanding the absence of the chairman of the Defense Committee, who entered the Medical Department of the Army and was overseas for almost a year, the work of that committee has been successfully carried on by the remaining members and the interests of the association have been satisfactorily guarded.

The Committee on Health and Public Instruction had an unusually strenuous season at the Fiftieth General Assembly, where many bills were introduced that required our opposition and a few which needed our support and approval. It is a gratifying report that you will hear from that committee, for every one of the bills that we opposed failed to pass and the important measures we supported became laws.

The other committees were rendered more or less inactive on account of the war, but with the return of peace I am sure they will renew their earnest effort for the maintenance of the organization.

For your consideration I would suggest that the councilors be urged to give earnest attention to the county societies in their districts during the coming year to build up the weak ones and enlarge the scope and activities of the strong ones.

My visits to the county societies were unfortunately greatly curtailed on account of the temporary suspension of county society work, the demands of local work in my home county in government activities, and an unusually heavy burden due to the epidemic of influenza, but I have kept myself informed of the work of the association and I feel that we can be

proud of our members and proud of our association for having come through such a strenuous period with our obligations fulfilled and our organization intact.

During the year death removed our second vice president, Dr. J. C. Matthews of Springfield. In his place I appointed Dr. F. B. Fuson of Springfield. I appointed acting councilors and members of various committees when the regularly elected representatives of these bodies entered the military service, but in most instances these members have returned home and resumed their duties.

In conclusion permit me to express my gratitude to the officers, councilors and committees of the association for their faithful service during the past year under perhaps the most trying conditions the medical profession of our state has ever experienced in its history. M. P. OVERHOLSER.

Dr. Breuer moved that the message be referred to the Council. Seconded and carried.

The president, Dr. M. P. Overholser, resumed the chair.

Dr. McComas, chairman of the Council, read the report of the Executive Committee as follows:

#### REPORT OF EXECUTIVE COMMITTEE OF THE COUNCIL

The executive committee of the Judicial Council reports the affairs of the association coming under its jurisdiction to be in excellent condition.

One of our members was physician at the State Sanatorium for Tuberculosis when he entered the Army service but the board refused to reinstate him when he returned.

The following resolution was adopted by the Executive Committee on Feb. 26, 1919, and forwarded to the governor:

WHEREAS, The Hon. Frederick D. Gardner, governor, has urged employers to reinstate in their old position, soldiers who have been honorably discharged from the military service, and the House of Representatives of the Fiftieth General Assembly adopted resolutions to the same effect, and

WHEREAS, Over 1,500 Missouri physicians served their country by joining the Medical Corps of the Army and the Navy in the war with Germany, and

WHEREAS, Some of those physicians were employed in the eleemosynary institutions and other departments of the state when they entered the military service, therefore be it

*Resolved*, That the executive committee of the Missouri State Medical Association requests the governor to use the power of his office to compel the restoration of such physicians to their former positions in state institutions and departments when honorably discharged from military service, should such action become necessary.

The governor acknowledged its receipt and said: "Your letter of the 26th has been received and carefully noted. We will be very glad to cooperate along the lines you suggest."

We recommend that the by-laws be so amended that the Council shall have authority to remit the state assessment of any member who may become permanently disabled through mental or physical disability.

We recommend that the House of Delegates arrange its session so that the election of president and the completion of unfinished business shall take place on the second day of the annual meeting.

The war and the recent session of the legislature laid an unusually heavy burden on the secretary's office but his report will show that the membership is practically up to the normal notwithstanding that a large number of members are still in the service.

The financial condition of the treasury is also up to normal status.

We recommend that \$500 be transferred to the defense fund and \$1,000 be transferred to the sinking fund. A. R. McCOMAS, Chairman.

Dr. J. N. Jackson moved that the report be received. Seconded and carried.

Dr. J. N. Jackson called attention to the recommendation of the Executive Committee regarding the refusal of the Board of Managers of the State Sanatorium for Tuberculosis to restore to his former position in the sanatorium one of our members who had been honorably discharged from the Medical Corps of the U. S. Army, and moved that a committee be appointed to draw up resolutions on our attitude on the question of restoring physicians employed by the state to their former positions after they return from service in the war. Seconded and carried.

The president appointed the following committee to draw up the resolutions mentioned in the above matter: Jabez N. Jackson, W. H. Breuer and A. R. McComas.

The recommendation of the Executive Committee concerning amendments to the by-laws were referred to the Committee on Constitution and By-Laws.

Dr. Funkhouser moved that the treasurer be directed to transfer \$500 from the general fund to the defense fund. Seconded and carried.

Dr. Funkhouser moved that the treasurer be directed to transfer \$1,000 from the general fund to the sinking fund. Seconded and carried.

Dr. E. J. Goodwin, secretary, read the report of the secretary-editor. (See page 238.)

Dr. Grindon moved that the report be adopted and that the members stand for one minute in memory of the physicians who died in the service. Seconded and carried.

Dr. Breuer moved that a committee of three be appointed to draw up resolutions on the death of those members who died in the service of the country during the war and that these resolutions shall be spread on the minutes of this meeting, be published in THE JOURNAL and a copy be sent to the members of the families of the deceased members.

It was moved that the motion be amended by referring the matter to the Committee on Necrology instead of to a special committee of three.

This amendment was seconded and carried and the original motion as amended then carried.

The report of the Committee on Scientific Work was read by Dr. W. C. Gayler as follows:

#### REPORT OF COMMITTEE ON SCIENTIFIC WORK

Your committee has had more than the usual amount of trouble and confusion to contend with this year. The men came from the Army in large numbers after the program was nearly completed. Most of our good men had been in the service so a complete rearrangement of the program at the last moment was necessary in order to make room for them.

The final result was seventeen papers from St. Louis, thirteen from Kansas City and eleven from the rest of the state.

The various branches of medical and allied sciences seem to be well represented. Surgeons, internists, neurologists, genito-urinary men, roentgenologists and others have found places on the program.

The Victory Meeting which is to take place this evening should prove particularly interesting, but it was exceptionally difficult to arrange this meeting. The returning doctors had so many interesting sub-



jects that it was very hard to get together a meeting of this kind because of the limited time at our disposal.

We trust the program will be a good one and we feel that if the result will be in proportion to the amount of energy expended by the committee the meeting will be a success.

E. J. GOODWIN, Chairman,  
W. J. FRICK,  
W. C. GAYLER.

On motion the report was adopted.

The report of the Committee on Health and Public Instruction was read by Dr. R. M. Funkhouser.

Dr. J. N. Jackson moved that the report be received and the committee thanked for their services. Seconded and carried.

Dr. R. S. Vitt read the report of the Committee on Defense. (See page 240.)

Dr. Funkhouser said that since the appropriation of \$500 had been made no further action was necessary and he moved that the report be adopted. Seconded and carried.

The report of the Committee on Prevention of Blindness was read by the secretary. (See page 240.)

Dr. Funkhouser moved that the report be adopted. Seconded and carried.

Dr. Joseph Grindon read the report of the Committee on Vaccination. (See page 240.) On motion the report was received.

The president announced the appointment of the following members of the Nominating Committee: F. E. Murphy, Kansas City, Thirteenth District; M. A. Bliss, St. Louis, Twentieth District; M. P. Shy, Sedalia, Seventeenth District; F. H. Matthews, Liberty, Twelfth District; A. B. Stone, Lamar, Sixteenth District; F. R. Anthony, Maryville, First District; H. S. Forgrave, St. Joseph, Second District; A. B. Clarke, Joplin, Twenty-Ninth District; V. Q. Bonham, Fayette, Ninth District; S. L. Baysinger, Rolla, Twenty-Sixth District.

On motion adjourned to 3 p. m.

#### Afternoon Session

The House of Delegates was called to order at 3:10 p. m. by the president, Dr. M. P. Overholser.

Dr. J. E. Baird, for the Committee on Arrangements, welcomed the association to Excelsior Springs in behalf of the mayor and the Clay County Medical Society.

Dr. J. F. Welch, treasurer, read his report which was referred to the Council. (See page 240.)

Dr. J. N. Jackson presented the following report of the special committee:

WHEREAS, When the call for sacrifice and service came, no class of men responded more generously or more promptly than the members of our profession, one-third of whose numerical strength volunteered without draft, and

WHEREAS, Major Frederick W. Shaw, a member of this association, was physician at the Mt. Vernon Sanatorium, a state institution for the treatment of tuberculosis when he was called to active duty in the Medical Officer's Reserve Corps. After having service in the Army with distinction he returned to take his former position and the Board of Managers refused to reinstate him, and

WHEREAS, Five months have now elapsed since Governor Gardner has been made aware of this fact, and

WHEREAS, We know that under the law of this state the governor is the only person who has the power to appoint this board and they are responsible

to him for the faithful performance of their duty. If they fail he alone can remove them, and that they cannot act in opposition to the will of the people unless he sanctions their acts, and

WHEREAS, The last General Assembly and all civic and religious bodies in this state who have spoken on this subject have said, all honorably discharged soldiers should be reinstated in their former places of employment, and

WHEREAS, Governor Gardner, in a speech at Joplin, Mo., on the 10th of February last, said, "Furthermore, every boy should be reinstated in his former place of employment when he returns with an honorable discharge from the service. It is unthinkable that any employer would withhold employment from those who offered their lives to protect the homes and business interest of those who remained at home," and

WHEREAS, Major Frederick W. Shaw by the faithful performance of his duties has fulfilled every requirement set forth, therefore be it

Resolved, That we, the Missouri State Medical Association, in convention assembled, now call on Governor Gardner to square his actions by his words that the honor of the state may not be debased by political intrigue.

JABEZ N. JACKSON,  
A. R. MCCOMAS,  
W. H. BREUER.

*The Committee.*

Dr. Jackson moved the adoption of the report which was duly seconded.

Dr. Joseph Grindon moved to amend the report by striking out of the last sentence the words, "that the honor of the state may not be debased by political intrigue."

The motion was seconded and lost.

The vote on the original motion was then put and the report was adopted.

Dr. Joseph Grindon offered a resolution of sympathy to the president, Dr. M. P. Overholser, on the death of his wife, as follows:

The association has learned to its sorrow of the heavy bereavement which has come to its honored president, Dr. M. P. Overholser, in the death of his wife, while he, during his term of office, has been dangerously ill.

While congratulating ourselves on our leader's happy recovery, we tender him our united and heartfelt sympathy in his loss, in the hope that this testimonial of the respect and affection of his brethren may in some small way serve to lighten his load of grief.

Dr. Grindon moved that the resolutions be adopted. Seconded and carried.

There being no report from the Committee on Constitution and By-Laws, the secretary read the following proposed amendments to the by-laws:

Amend Chapter V, Section 3, of the by-laws by striking out all of the second sentence beginning with the word "the" in the fourth line, and inserting in lieu thereof the following:

It shall meet on the second day of the annual session to receive the report of the Nominating Committee and complete unfinished business. The election of officers shall be the first order of business after reading the minutes at this session. No new business shall be introduced at this session without the unanimous consent of the delegates. So that the section shall read as follows:

The House of Delegates shall remain in continuous session on the first day of the annual session and complete the work coming before it at that session. It shall meet on the second day of the annual session to receive the report of the Nominating Committee

and complete unfinished business. The election of officers shall be the first order of business after reading the minutes at this session. No new business shall be introduced at this session without the unanimous consent of the delegates.

Amend Chapter VII, by adding a new section to be known as Section 4a, as follows:

Section 4a.—The Council may upon request of a component society remit the state assessment of a member who has become totally and permanently incapacitated through mental or physical disability and has been a member in good standing during the three consecutive years immediately preceding his disability; provided, that the component society shall remit the county society dues of such member.

These were held over for one day.

Dr. G. C. Eggers offered an amendment to Section 3 of Chapter VIII of the by-laws as follows:

Amend Section 3 of Chapter VIII by striking out in line two the word "three" and inserting in lieu thereof the word "five."

This was held over for one day.

The report of the Nominating Committee was read by Dr. Franklin E. Murphy as follows:

We, the nominating committee, respectfully submit the following nominations for the elective office of the Missouri State Medical Association for the ensuing periods:

First Vice President, J. J. Gaines, Excelsior Springs; Second Vice President, E. F. Yancey, Sedalia; Third Vice President, W. A. Clark, Jefferson City; Fourth Vice President, A. M. Gregg, Joplin; Fifth Vice President, J. C. Lyter, St. Louis.

Member of the Committee on Health and Public Instruction, J. Frank Harrison, Mexico.

The Defense Committee, R. E. Schluter, C. E. Hyndman, and R. S. Vitt, St. Louis.

Committee on Vaccination, C. H. Jones, Jefferson City.

Councilors: Fifteenth District, L. J. Schofield, Warrensburg; Twenty-Second District, H. L. Reid, Charleston; Twenty-Sixth District, W. H. Breuer, St. James; Twenty-Seventh District, J. C. B. Davis, Willow Springs; Twenty-Eighth District, A. L. Anderson, Springfield; Twenty-Ninth District, R. L. Wills, Neosho.

Committee on Cancer: W. K. Trimble, Kansas City.

Delegates to the American Medical Association: R. M. Funkhouser, E. J. Goodwin, St. Louis.

Dr. J. N. Jackson moved that the report be taken up in sections—the general officers and then chairmen of committees, etc. Seconded and carried.

Dr. Jackson moved that the names of the vice presidents and councilors be accepted and the secretary cast the ballot for their election. Seconded and carried.

The secretary cast the ballot and the candidates were declared elected.

Dr. Jackson moved that the names of the chairman of committees mentioned in the report be accepted and the secretary cast the ballot for their election. Seconded and carried.

The secretary cast the ballot and the candidates were declared elected.

Dr. E. J. Goodwin asked to be relieved as delegate to the American Medical Association.

Dr. Engelbach moved that Dr. Goodwin's resignation be accepted. Seconded and carried.

Dr. Schisler moved that Dr. A. H. Koetter of St. Louis be elected a delegate to the American Medical Association. Seconded and carried.

On motion, duly seconded, the report of the Nominating Committee as altered was adopted.

The election of the president was the next order of business.

Dr. Jabez N. Jackson nominated Dr. N. P. Wood of Independence for president. Seconded by Dr. Elsworth S. Smith of St. Louis.

Dr. Woodson moved that the rules be suspended and Dr. Wood be elected by acclamation. Seconded and unanimously carried.

Dr. Shy moved that Jefferson City be selected as the next place of meeting. Seconded and carried.

The secretary read a letter from Dr. E. H. Bullock, health director of Kansas City, as follows:

KANSAS CITY, May 7, 1919.

Dr. E. J. GOODWIN, Secretary,  
St. Louis, Mo.

Dear Dr. Goodwin:—I am herewith transmitting to you copies of letters along the line of asking the American Public Health Association to hold its annual meeting in 1920 in Kansas City, Mo. The Health Department has extended to that association an invitation. The Jackson County Medical Society has authorized the Committee on Public Health to do what they can to secure the convention for this city. The Chamber of Commerce will do all in their power to secure the convention and entertain the same. Co-operation along this line from THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION will be appreciated.

If I do not see you before, I hope to see you at the state meeting in Excelsior Springs.

Thanking you for your untiring efforts in behalf of the profession in the state, and assuring you of every cooperation, I am, Sincerely yours,

(Signed) E. H. BULLOCK, Health Director.

Dr. Jackson moved that the House of Delegates unite with the Kansas City doctors in inviting the American Public Health Association to hold its 1920 meeting in Kansas City. Seconded and carried.

Dr. Breuer moved that when the House of Delegates adjourn it adjourn to meet at 5 o'clock Tuesday afternoon, when it shall consider the report of the Committee on Constitution and By-Laws and the report of the Committee on Necrology. Seconded and carried.

On motion adjourned.

Tuesday, May 27, 1919

The House of Delegates was called to order at 5:15 p. m. by the president.

The minutes of previous meetings were read by the secretary.

Dr. Hamel moved that these minutes be approved as read. Seconded and carried.

Dr. C. R. Woodson, St. Joseph, although he was not a delegate, asked that the treasurer's report in full, showing the source whence the money is received and a detailed statement of vouchers, to whom issued and for what purpose, be published in THE JOURNAL.

The president ruled that since the House of Delegates had met to consider only the amendments to the constitution and by-laws and the report of the necrology committee, it would take a unanimous vote of the House to take up any new business.

Dr. Shy, of the Committee on Constitution and By-Laws, being absent, Dr. Hamel moved that the secretary read the amendments. Seconded and carried.

The secretary read the amendment to Chapter V, Section 3, as follows:

Amend Chapter V, Section 3, of the by-laws by striking out all of the second sentence beginning with the word "the" in the fourth line, and inserting in lieu thereof the following:



"It shall meet on the second day of the annual session to receive the report of the Nominating Committee and complete unfinished business. The election of officers shall be the first order of business after reading the minutes at this session. No new business shall be introduced at this session without the unanimous consent of the delegates." So that the section shall read as follows:

"The House of Delegates shall remain in continuous session on the first day of the annual session and complete the work coming before it at that session. It shall meet on the second day of the annual session to receive the report of the Nominating Committee and complete unfinished business. The election of officers shall be the first order of business after reading the minutes at this session. No new business shall be introduced at this session without the unanimous consent of the delegates."

Dr. Breuer moved that the amendment be adopted. Seconded and carried.

The secretary read the amendment to Chapter VII, as follows:

Amend Chapter VII by adding a new section to be known as Section 4a, as follows:

The Council may upon request of a component society remit the state assessment of a member who has become totally and permanently incapacitated through mental or physical disability and has been a member in good standing during the three consecutive years immediately preceding his disability; provided, that the component society shall remit the county society dues of such member.

Dr. Hamel moved that the amendment be adopted. Seconded and carried.

The secretary read the amendment to Chapter VIII, Section 3, as follows:

Resolved that the By-Laws of the Missouri State Medical Association be and the same are hereby amended by striking out in line two of Section 3 of Chapter VIII the word "three" and inserting in lieu thereof the word "five."

Dr. Brummall moved the amendment be adopted. Seconded and carried.

Since the Necrology Committee had no written report, it was moved by Dr. Breuer that the Necrology Committee be instructed to send a report to the secretary for publication in *THE JOURNAL*, and that the records show that it was made at this meeting. Seconded and carried.

On motion, duly seconded, the House of Delegates adjourned *sine die*.

## MINUTES OF THE COUNCIL

Monday, May 26, 1919

The Council met at 1:30 p. m., May 26, 1919, in the Ball Room of the Elms Hotel and was called to order by the chairman, Dr. A. R. McComas. The following councilors were present: First District, E. L. Crowson; Second District, O. C. Gebhart; Fourth District, J. B. Wright; Ninth District, A. R. McComas; Tenth District, D. A. Barnhart; Eleventh District, G. W. Hawkins; Twelfth District, Spence Redman; Thirteenth District, Franklin E. Murphy; Fifteenth District, H. S. Crawford; Sixteenth District, E. N. Chastain; Seventeenth District, W. J. Ferguson; Eighteenth District, J. P. Burke; Nineteenth District, S. V. Bedford; Twentieth District, A. H. Hamel; Twenty-Sixth District, W. H. Breuer; Twenty-Ninth District, R. L. Wills.

Dr. Ferguson moved that the minutes of the 1918 meeting be approved as published in *THE JOURNAL*. Seconded and carried.

The chairman reported that a gift had been purchased for Mr. Morton Jourdan, counsel for the association, who has rendered valuable services to the association for many years and has always declined to accept a fee. The chairman also read the letter of acknowledgement from Mr. Jourdan.

It was moved that this letter of acknowledgement be incorporated in the archives of the association. Seconded and carried.

The letter follows:

ST. LOUIS, Mo., Dec. 16, 1919.

DR. A. R. MCCOMAS,  
Sturgeon, Mo.

*My Dear Doctor:*—I have in my home the most beautiful silver pitcher that I have ever seen, the kind gift of your committee, representing the Missouri State Medical Association, of which I have had the honor to be counsel and legal advisor for several years.

Words are inadequate to express my sincere and deep appreciation not only of this beautiful gift but the spirit and feeling which brought it about. There is no compensation in the world to me equal to that of appreciation, and, to realize that the little service I have been able to render your association is so thoroughly appreciated is indeed a joy in itself. In all my practice I have had no more pleasant relations than those which have existed between the association and the writer, and the personal friendship and esteem which I have for the members of your profession associated together in this organization is a source of much pride and pleasure.

Will you please convey to them my sincere thanks and appreciation, and believe me,

Sincerely your friend,

(Signed) MORTON JOURDAN.

Dr. A. H. Hamel moved the action of the House of Delegates ordering \$500 transferred from the general fund to the defense fund and \$1,000 transferred from the general fund to the sinking fund, be approved by the Council. Seconded by Dr. Ferguson and carried.

The secretary read that part of the president's message recommending that the councilors give special attention to building up the component societies.

Dr. Hamel suggested that the subject be referred to the Secretaries' Society with special reference to stimulating interest in research and scientific work in the county societies.

Dr. Ferguson moved that the matter be referred to the Secretaries' Society with the request that they report back to the Council with recommendations.

Dr. Breuer moved as an amendment that the Council delegate this duty to Dr. Hamel and request him to report to the Council.

Dr. Hamel moved as a substitute that the attention of the Secretaries' Society be invited to Section 7 of Chapter IV of the By-Laws, referring to post-graduate and research work, for suggestions and recommendations to the Council on the best means of stimulating the interest of the component societies in these subjects. Seconded.

Dr. Breuer moved as an amendment that Dr. Hamel be delegated to present the matter to the Secretaries' Society. Seconded and carried.

The substitute motion then carried as amended.

Dr. Breuer read the report of the Committee on Publication as follows:

## REPORT OF THE PUBLICATION COMMITTEE

From January to December, 1918, inclusive, the fifteenth volume of *THE JOURNAL* was published comprising 464 pages in the twelve issues. These numbers contained 73 original articles, 68 editorials, 161 society proceedings, 72 book reviews, and miscellane-

ous matter. The total number of JOURNALS printed was 45,250 and the cost of producing them amounted to the following:

Printing .....	\$3,926.90
Postage .....	393.72
Freight and hauling.....	279.64
	<hr/>
Advertising income .....	5,193.92
Gain .....	593.66

In addition to the above amount collected we had outstanding accounts receivable on December 31 amounting to \$471.86, all of which is collectable, thus making the total gain \$1,065.52.

As most of you know, our JOURNAL is printed at the headquarters of the American Medical Association in Chicago and was shipped to St. Louis by freight where it was sacked and routed for mailing by our editor and placed in the postoffice. Not infrequently we encountered delays in transportation which caused a corresponding delay in mailing the JOURNAL to the members—sometimes as much as two weeks after THE JOURNAL had actually been printed. Beginning with the January issue of this year we arranged to mail THE JOURNAL at Chicago by obtaining the second class privilege through the Chicago postoffice. We were greatly assisted in this by Dr. Simmons, Editor of the *Journal of the American Medical Association*.

The new arrangement makes a considerable reduction in our expense for postage, freight and hauling and facilitates rapid mailing of THE JOURNAL. It increases the labor on our JOURNAL at the A. M. A. headquarters, but this burden was cheerfully assumed by Dr. Simmons.

We have maintained our standard of ethical advertising although in doing so we have refused contracts that would have added hundreds of dollars to our income. Your committee recommends a continuation of this policy so that our JOURNAL shall always reflect the high ideals that ennoble and dignify our profession.

During the absence of the chairman of this committee in the service of the Medical Department of the Army, Dr. L. W. Cape acted as chairman and rendered faithful service during the trying period of the war.

W. H. BREUER, Chairman.  
SCOTT P. CHILD,  
M. A. BLISS.

Dr. Ferguson moved that the report be adopted. Seconded and carried.

The secretary read a letter from the secretary of the American Medical Association as follows:

Chicago, Ill., March 31, 1919.

Dr. E. J. Goodwin,  
3517 Pine St.,  
St. Louis, Mo.

Dear Doctor:—At a recent meeting of the Judicial Council there were two matters presented to that body as "general professional conditions—pertaining to the relations of physicians to one another and to the public.

In order that the Judicial Council may take these subjects under consideration, and if it be deemed advisable, make recommendations to the House of Delegates and the Constituent Associations relative thereto, the Council has directed me to ask for information.

First, what, if anything, is being done in a systematic way by your State Association or by any of its component county societies for the relief of aged or physically incapacitated physicians or for members of the families of physicians who are in financial distress? It is known that in certain localities,

branches of the organization have made provision for meeting conditions of this character when they arise. The Judicial Council desires to determine whether or not these efforts are capable of being standardized or coordinated. Consequently it will appreciate a report not only of what measures are now in effect but also a memorandum of how this relief is afforded, and whether these measures are fully meeting the needs among the profession of your state.

Second, both that the question may have the consideration of your State Association, if it has not already taken action, and also that the Judicial Council may have information concerning what is being done, your counsel is desired as to how the organization—the county, state and national bodies—can best assist physicians who are being released from military service to reestablish themselves in civilian practice. It has been reported to the Judicial Council that in a few instances county medical societies have apparently objected to physicians returning from military service endeavoring to locate within the jurisdiction of these societies—at least that they have refused to consider applications for membership submitted by these physicians and, it is alleged, have objected to these physicians affiliating with the staffs of or undertaking to treat patients in local hospitals. The Judicial Council appreciates there are two sides to every question and is anxious to determine the consensus of opinion relative to these matters, and others pertaining to the main question—namely, how best physicians returning from military service can be assisted to reestablish themselves in civil practice.

Very truly yours,  
(Signed) ALEX. R. CRAIG, Secretary.

After a general discussion Dr. Breuer moved that the secretary be instructed to answer the letter and give the Judicial Council of the American Medical Association a full account of the conditions as they exist in Missouri. Seconded and carried.

The secretary read a letter from a member living in the 28th Councilor District in which the doctor explained that upon his return from service in the Army he found two other physicians in his city taking over his practice. The member stated that he considered the action of the other physicians unfair and declared that he intended to resign from the county medical society. The councilor of the district held that the Association could not take any step looking toward the evacuation of a town by physicians under such circumstances, as the people had a right to call any physician they chose.

Dr. Breuer moved that the secretary write the member and prevail upon him if possible to continue his membership, and say that the Association can have nothing to say about the treatment of returned men. Seconded and carried.

The secretary read a letter from Dr. G. D. Dalglish of Osceola concerning an advertisement of Dr. Dalglish's on a circular about fitting glasses and his reply that such advertising was unethical.

The secretary read a letter from Dr. W. H. Bonduant of Memphis and a newspaper item lauding a member for his work in the Medical Corps of the Army.

No action was taken on either letter.

The chair appointed the following committee to audit the books of the secretary and of the treasurer: Drs. W. J. Ferguson, A. H. Hamel and H. S. Crawford.

On motion adjourned subject to the call of the chairman.

Tuesday, May 27, 1919

The Council met at 2 p. m. on the call of the chairman in the Sun Parlor of the Elms Hotel, May 27,



1919. Fifteen members were present including Dr. L. J. Schofield, the new councilor for the Fifteenth District.

The minutes of the previous meeting were read and approved.

Dr. W. J. Ferguson, chairman of the auditing committee reported as follows: "We the auditing committee have this day examined the books of the treasurer and find the same correct. We have also this day examined the books of the secretary and find them correct."

W. J. FERGUSON, Chairman,  
A. H. HAMEL,  
H. S. CRAWFORD.

May 26, 1919.

Dr. Burke moved that the report be received, adopted and spread upon the minutes. Seconded and carried.

Dr. A. H. Hamel, special representative from the Council to the Medical Secretaries' Association, reported that he had carried the message of the Council to the secretaries regarding ways and means for pursuing research and scientific work by the county societies and that the secretaries had received the suggestion with enthusiasm and ordered a committee of secretaries to be appointed who shall devise means of assisting the Council in accomplishing the work contemplated.

On motion the report of Dr. Hamel was received and the thanks of the Council extended to him.

The election of officers being the next order of business, Dr. Hamel moved that Dr. McComas be reelected chairman of the Council. Seconded by Dr. Ferguson.

Dr. Hamel put the motion and it was unanimously carried.

Dr. Burke moved that the rules be suspended and that Dr. Welch be reelected treasurer by acclamation. Seconded and carried.

Dr. Burke moved that the rules be suspended and that Dr. Goodwin be reelected secretary-editor of the Association by acclamation. Seconded and carried.

Dr. Murphy moved that the present executive committee of the Council be elected to succeed itself. Seconded and carried.

Dr. Hamel moved that Dr. Goodwin be reelected secretary of the Council by acclamation. Seconded and carried.

On motion adjourned.

## MINUTES OF THE GENERAL MEETING

### Victory Session

Monday, May 26, 1919

The Victory Session was held in the Ball Room of the Elms Hotel, Monday evening, May 26, 1919. The music was furnished by a local orchestra.

The president, Dr. M. P. Overholser, presided. A beautiful service flag was dedicated, the address being delivered by Dr. H. E. Pearse of Kansas City.

Addresses were made by Drs. Walter Fischel and Arthur W. Proetz, of St. Louis, on the work of Base Hospital No. 21; Drs. G. H. Hoxie and G. Wilse Robinson, of Kansas City, on Base Hospital No. 28; a few remarks by Dr. Geo. R. Dagg, of North Kansas City, and by Dr. J. F. Binnie, of Kansas City.

Adjourned until nine o'clock Tuesday morning.

## GENERAL MEETING

Tuesday, May 27, 1919

### Morning Session

The General Meeting was called to order at 9:20 a. m. by the president, Dr. M. P. Overholser, of Har-

risonville. Dr. T. G. Hetherlin, of Louisiana, vice president, took the chair while the president read his address.

Dr. H. P. Kuhn, Kansas City, read a paper entitled "The Management of Streptococcic Erysipelas."

Dr. Logan Clendening, Kansas City, read a paper on "The Mechanics of Fluid in the Pleural Cavity."

These two papers were discussed by Drs. Hudson Talbott, St. Louis; J. C. Lyter, St. Louis; N. I. Stebbins, Clinton; Llewellyn Sale, St. Louis, and the discussion closed by Drs. Kuhn and Clendening.

Dr. M. A. Bliss introduced a resolution addressed to Governor Gardner as follows:

"Resolved, That it is the sense of this Association that a thorough understanding of all matters pertaining to epileptic, feeble-minded, and insane of the State of Missouri can be had only by a survey made by well-trained investigators. Such a survey seems indispensable to the foundation of wise legislation which would be suggested by the results of the survey, and be it further

"Resolved, That we respectfully request the Governor to accept the offer of the National Committee on Mental Hygiene and invite them into the State to complete the survey and submit a report."

Dr. Bliss moved the adoption of the resolution. Seconded by Dr. C. R. Woodson and carried, and the resolution referred to the House of Delegates.

Dr. C. E. Burford, St. Louis, read a paper on "Ureteral Calculi." There was no discussion of this paper.

Dr. J. W. Sherer, Kansas City, read a paper entitled "Neuro-Retinitis (Choked Disc) Sequel to Thyroid Extirpation." This paper was discussed by Drs. F. E. Woodruff, St. Louis; E. H. Higbee, St. Louis, and the discussion closed by Dr. Sherer.

Dr. E. H. Kessler, St. Louis, read a paper entitled "A Plea for the Early Recognition of Stomach Malignancy." This paper was discussed by Drs. O. H. McCandless, Kansas City; C. H. Neilson, St. Louis; Elsworth S. Smith, St. Louis; J. G. Sheldon, Kansas City, and the discussion closed by Dr. Kessler.

On motion the meeting adjourned until 1 o'clock.

### Afternoon Session

The meeting was called to order at 1:30 p. m. by the president.

Dr. E. B. Knerr, Kansas City, read a paper entitled "X-Ray Treatment of Osteosarcoma." This paper was discussed by Drs. L. A. Marty, Kansas City; J. G. Sheldon, Kansas City; J. C. Morfit, St. Louis, and by Dr. Knerr in closing.

Professor Phillips, of Warrensburg, being present representing the Missouri Health Conference, was invited to address the meeting and in a few words explained the purpose of the conference which would be held at Springfield May 29 to June 1, and invited all the members of the Association to attend the meeting.

Dr. J. C. Lyter, St. Louis, read a paper entitled "So-Called Irritable Heart of Soldiers." This paper was discussed by Drs. C. H. Neilson, St. Louis; M. A. Bliss, St. Louis; and the discussion closed by Dr. Lyter.

Dr. Llewellyn Sale, St. Louis, read a paper entitled "The Epidemic of Influenza in France." There was no discussion of this paper.

Dr. Mazyck P. Ravenel, Columbia, read a paper entitled "Preventive Medicine in War."

Dr. J. C. Morfit, St. Louis, read a paper entitled "Medical Problems in Future." This paper and that of Dr. Ravenel were discussed by Drs. J. F. Binnie, Kansas City; A. T. Fisher, St. Joseph, and the discussion closed by Dr. Ravenel.

Dr. Stanley S. Burns, St. Louis, read a paper entitled "Ear, Nose and Throat Service in Base Hospitals."

There was no discussion on this paper.

Dr. C. A. Ritter, Kansas City, read a paper entitled "Why Prenatal Care?"

The subject was discussed by Drs. D. R. Parman, St. Louis; G. C. Mosher, Kansas City; E. P. Hamilton, Kansas City, Dr. Ritter closing.

Dr. W. H. Vogt, St. Louis, read a paper entitled "Interruption of Pregnancy at Term." This paper was discussed by Drs. F. T. Van Eman, Kansas City; G. C. Mosher, Kansas City; Burford G. Hamilton, Kansas City; Dr. Vogt closing.

At this point the General Meeting adjourned in order that the House of Delegates might have a meeting to take up some unfinished business.

Following the meeting of the House of Delegates the General Session again convened. At this time Dr. C. R. Woodson renewed the motion made in the House of Delegates that an itemized statement of the treasurer's receipts and disbursements be published in the JOURNAL. Seconded.

Dr. M. P. Shy, Sedalia, rose to a point of order, declaring Dr. Woodson's motion out of order. Although the chair ruled the motion out of order, he permitted a discussion of the subject by Drs. C. R. Woodson, A. H. Hamel, J. C. Morfit and J. D. Brumhall.

Dr. J. C. Morfit moved that the meeting go into a committee of the whole and take this matter up and settle it. Motion seconded.

The chair ruled this was a matter for the House of Delegates and declared the motion out of order. Dr. Morfit appealed from the decision of the chair, and the decision of the chair was not sustained.

Dr. W. H. Breuer moved that the motion to go into a committee of the whole be tabled. Seconded and carried.

Dr. H. E. Pearse offered the following resolution: WHEREAS, The Missouri State Board of Health has been handicapped in its cooperation with the United States Public Health Service in conducting a vigorous campaign against venereal diseases on account of lack of funds, and

WHEREAS, Physicians are particularly interested in that part of the campaign which relates to the diagnosis and treatment of venereal diseases, and

WHEREAS, The Missouri State Board of Health has been unable to arrange to provide facilities for free laboratory examinations of specimens for the diagnosis of venereal diseases, and has been unable to furnish free arsphenamin for indigent cases, and has been unable to adopt the policy of establishing clinics for the treatment of venereal diseases in the larger cities, therefore be it

*Resolved*, That the Missouri State Medical Association heartily indorse the campaign being waged by the U. S. Public Health Service and especially that part of the campaign which provides facilities for the diagnosis and treatment of venereal diseases, and be it further

*Resolved*, That the Missouri State Medical Association call upon all physicians in the State to cooperate with the health authorities in their effort to combat venereal diseases, and be it further

*Resolved*, That the local authorities in the larger cities of the state be urged to provide for the establishment of clinics in cooperation with the State Board of Health, and be it further

*Resolved*, That copies of these resolutions be sent to the Surgeon General of the Public Health Service, the Secretary of the State Board of Health, the editor of *The Journal of the American Medical Association*, and the editor of *THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION* with a request that they be published.

Dr. Pearse moved adoption of the resolution. It was seconded by Dr. A. H. Hamel and carried.

On motion the General Meeting adjourned to Wednesday morning.

Wednesday, May 28, 1919

#### Morning Session

The meeting was called to order at 9:20 a. m. by the president.

The paper of Dr. H. E. Pearse, entitled "A Contribution to the Study of Fibroid Tumors with a Suggestion for Their Control," was read by title.

Dr. F. E. Wilhelm, Kansas City, read a paper on "The Hour Glass Uterus." This paper was discussed by Dr. Burford G. Hamilton, Kansas City.

Dr. Elsworth S. Smith, St. Louis, read a paper entitled "Further Observations on the Rôle of the Vasomotor Response in the Cardiac and Renal Compensation of Hypertensive Cardiovascular Renal Disease." This paper was discussed by Drs. Edwin Schisler, St. Louis; Francis R. Fry, St. Louis; Llewellyn Sale, St. Louis, and the discussion closed by Dr. Smith.

The newly elected president, Dr. N. P. Wood, Independence, was then conducted to the chair and presided during the balance of the sessions.

Dr. W. K. Trimble, Kansas City, read a paper entitled "Observations on the Treatment of Syphilis."

Dr. M. O. Biggs, Fulton, read a paper on "Conditions Other Than Lues Giving Positive Wassermann Reaction."

These papers were discussed by Drs. A. L. Skoog, Kansas City; R. B. H. Gradwohl, St. Louis; C. R. Woodson, St. Joseph; M. F. Engman, St. Louis; Wm. Frick, Kansas City, and by Dr. Trimble in closing.

Dr. P. T. Bohan, Kansas City, read a paper on "Extracardio-Vascular Causes for Angina Pectoris." This paper was discussed by Drs. W. P. Elmer, St. Louis; Elsworth S. Smith, St. Louis, Dr. Bohan closing.

Adjourned to Wednesday afternoon.

#### Afternoon Session

The meeting was called to order at 1:15 p. m. by the president.

Dr. Hermon S. Major, Fulton, read a paper entitled "The Work of the Neuropsychiatrist in the Army Camps."

The president announced that this paper, together with the three next following, being on kindred topics, would be read and discussed together, if there was no objection to this order. No objection was made and the order was followed.

Dr. D. S. Booth, St. Louis, read a paper entitled "Syphilis in the Etiology of Epilepsy."

Dr. J. E. Harris, Marshall, read a paper entitled "Observations Concerning the Feeble-Minded and Epileptic."

Dr. T. F. Lockwood, Butler, read a paper on "Hysteria: Diagnosis, Prognosis and Treatment."

These papers were discussed by Drs. M. A. Bliss, St. Louis, and F. M. Barnes, St. Louis.

Dr. O. B. Hall moved that discussion of papers be discontinued and that the papers remaining on the program be read without discussion. Seconded and carried.

The following papers were read by their authors: "Congenital Pyloric Stenosis," by Dr. Roland Hill, St. Louis.

"Congenital Pyloric Stenosis, Pylorospasm and Chronic Appendicitis," by Dr. Caryl Potter, St. Joseph.

"Care of the Eye, Ear, Nose and Throat in General Practice," by Dr. James P. McCann, Warrensburg.

"Nerve Suture with Special Reference to Injuries of the Muscolospiral Nerve," by Dr. Francis Reder, St. Louis.

"Physiopathology of Intestinal Obstruction," by Dr. Eugene P. Hamilton, Kansas City.



"Conservative Surgery of the Pelvic Organs," by Dr. Bert A. Poorman, Kansas City.

"Treatment of Hemorrhoids," by Dr. Carroll Smith, St. Louis.

"Toxemia," by Dr. O. B. Hall, Warrensburg.

"Oak Pollen Anaphylaxis: Report of a Case," by Dr. R. L. Kerr, Crane.

The following papers were read by title:

"Choice of Operation for Inguinal Hernia," by Dr. R. E. Schueter, St. Louis.

"Care of Face and Jaw Injuries in the Army," by Dr. Wilray P. Blair, St. Louis.

"The Interpretation of Some Anatomical Curiosities in Man," by Dr. A. G. Pohlman, St. Louis.

"Pseudo-Appendicitis," by Dr. J. J. Link, St. Louis.

On motion the general meeting adjourned *sine die*.

#### REPORT OF THE SECRETARY-EDITOR

It is gratifying to report that we have emerged from the strenuous period of the war with our membership intact and our obligations to the government fully met and the prospects bright for pursuing the high purposes on which our organization is founded. During the war we cooperated with every governmental agency and with the Red Cross, all of whom found our organization invaluable as a source of information concerning the status of physicians in the state. A year ago we had a military meeting when the chairman of the Medical Section of the Council of National Defense was present to plead for physicians to enlist in the service. This year we have a victory meeting to welcome home the members who answered the call. We may look upon our record without blush or tremor knowing that we have performed our duty well in the time of the country's need.

To the best of my ability I have listed 1507 physicians from Missouri who accepted commissions in the military forces. Of this number 1030 are members of our Association. A large number have been honorably discharged and returned to their homes but there are eleven homes made desolate by the loss of the loved ones who went forth to save and succor the sick and wounded and gave their lives to the cause. Their names should be inscribed upon the enduring records of this Association and are here presented:

1. Lieut. Floyd S. Bates, Adrian. (Bates County.) Killed by lightning at Ft. Riley, August 6, 1917. He was a member of Bates County Medical Society.

2. Lieut. Lloyd R. Boutwell, Kansas City. (Jackson County.) Died from wounds in France, November 14, 1918. He was not a member of the county medical society.

3. Capt. Wilford A. Fair, Pleasant Hill. (Cass County.) Killed by snipers in the Argonne Forest, October 6, 1918, when he ran to the aid of a fellow officer who had been mortally wounded and was lying in an exposed position under machine gun fire. He was a member of Cass County Medical Society.

4. Capt. George E. Farr, Shelbyville. (Shelby County.) Died in the base hospital at Brownsville, Texas, from pneumonia, following influenza, October 30, 1918. He was a member of Shelby County Medical Society.

5. Lieut. Wm. T. Fitzsimmons, Kansas City. (Jackson County.) Killed by bombs dropped from a German airplane on the base hospital of the Harvard Unit at Rouen, Sept. 4, 1917. He was a member of the Jackson County Medical Society.

6. Lieut. Frank V. Frazier, Altamont. (Davies County.) Died in France from bomb wounds, March

24, 1918. He was a member of Davies County Medical Society.

7. Capt. John D. Hass, Clarkton. (Dunklin County.) On duty at Ft. Bliss, Texas, died from pneumonia, October 17, 1918, following influenza. He was a member of the Dunklin County Medical Society.

8. Lieut. Charles R. Long, Sedalia. (Pettis County.) Killed by a shell while returning from duty in the front line in France, April 26, 1918. He was a member of Pettis County Medical Society.

9. Lieut. Wilford W. Martin, Kirksville. (Adair County.) Was thrown from a horse while on duty in a British Camp in France and died from his injuries, December 4, 1918. He was not a member of the county society.

10. Lieut. J. Louis Swarts, St. Louis. (St. Louis City.) On duty at Fort Oglethorpe, died from pneumonia December 24, 1918. He was a member of the St. Louis Medical Society.

11. Lieut. Guy A. Tull, Kansas City. (Jackson County.) On duty at Camp Funston and furloughed home where he died of nephritis, July 13, 1918. He was a member of the Jackson County Medical Society.

Five of these were killed in action, two died from accident and four died from disease.

Four Missouri physicians were captured by the enemy and held prisoners until the end of the war. They are:

Dr. L. M. Edens, Cabool, Texas County.

Dr. H. A. Goodrich, Webster Groves, St. Louis County.

Dr. J. F. Hardesty, Winfield, Lincoln County.

Dr. A. H. Sewing, St. Louis.

All are members of our Association except Dr. Goodrich.

As far as I have been able to learn, five Missouri physicians were decorated for distinguished service. Their names follow:

Nathaniel Allison, Lieutenant Colonel, M. C., U. S. Army, St. Louis. Awarded Distinguished Service Medal by General Pershing.

Emil H. Burgher, Major, M. C., U. S. Army, St. Louis. Awarded the Distinguished Service Medal by General Pershing.

George R. Dagg, Captain, M. C., U. S. Army, North Kansas City. Awarded the Croix de Guerre, the British Military Cross and the Distinguished Service Cross.

Burton Maltby, Lieutenant, M. C., U. S. Army, Liberty. Awarded the British Military Cross.

Fred T. Murphy, Colonel, M. C., U. S. Army, St. Louis. Awarded the Distinguished Service Medal by General Pershing.

All are members of our Association except Major Burgher.

I endeavored to mail THE JOURNAL to our members in the service and forwarded it as often as I could obtain military addresses.

#### Membership

Number of members, April 20, 1918.....	3,244
New members .....	222
Reinstated .....	6
	<hr/> 3,472
Resigned .....	8
Transferred .....	16
Dropped .....	39
Expelled .....	1
Deceased .....	45
	<hr/> 109

Number of Members April 20, 1919..... 3,363  
Increase ..... 119

E. J. GOODWIN, Secretary-Editor.

## REPORT OF THE COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

Your Committee on Health and Public Instruction had a larger number of bills to oppose in this year's session of the general assembly than ever confronted us in any previous session. There were also more bills of a constructive character which were worthy of the support of the organization than in other sessions so that the committee was very busily engaged during the entire session, which held for 120 days. One member of the committee, Dr. A. W. McAlester, Jr., was in the service and his place was filled by Dr. H. E. Pearse, of Kansas City.

We are glad to report the defeat of all bills that we opposed and the passage of two bills increasing the powers of the state board of health, the workman's compensation bill, and many of the bills of the Children's Code Commission.

No attempt was made to introduce a bill to create a central board of control for the eleemosynary institutions. The disturbed conditions due to the war and the absence of several members of the special committee in service made it appear impractical to prepare a satisfactory measure for the consideration of this general assembly.

The bill that caused us the most concern was House Bill 859. Had it passed there would have been no restriction upon the kind of medical college that could incorporate and confer degrees and the state board of health would have been compelled to examine the graduates. The present law reads that the board shall examine the graduates of reputable medical colleges. House Bill 859, if passed, would have changed "reputable" to "legally chartered." It is to be regretted that it was vigorously pushed by a member of our association and by a member of the House of Representatives who is a physician though not a member of this body. It passed the House by a fluke at a time when most of those who were known to be opposed to it were absent.

The passage of the bills increasing the powers of the state board of health was accomplished after much work and some compromises. The result is not unsatisfactory.

Your committee have not been in favor of any compromises and when possible have not been a party to them.

The organized medical profession of the state should be congratulated in maintaining the high standard of medical education and the aid of the members of the Fiftieth Legislature is hereby duly recognized who cooperated with the organized medical profession of the state.

Your committee in conjunction with other members visited the capital whenever necessary and the secretary made frequent trips in order to keep track of the bills. We were aided and our work made more impressive and convincing by the assistance of the following members of the Association who went to Jefferson City at different times: R. M. Funkhouser, St. Louis; H. E. Pearse, Kansas City; J. Frank Harrison, Mexico; R. S. Vitt, Archer O'Reilly, F. M. Barnes, Jr., Wm. Engelbach, A. H. Hamel, D. M. Schoemaker, A. G. Pohlman, J. J. Singer, M. A. Bliss, W. McNabb Miller, Major L. P. Bahrenburg, all of St. Louis; E. H. Bullock, Hugh Miller, G. L. Koch, of Kansas City; A. R. McComas, of Sturgeon; H. DeLamater, of St. Joseph; G. C. Eggers, of Clayton, and the members of the State Board of Health.

Finally we were materially aided by Drs. C. H. Jones of Wayne County, W. A. Porter of Lafayette County and A. J. Speer of Bollinger County, all members of the House of Representatives, although Dr. Speer deserted us when he espoused the cause of House Bill 859 and was chiefly responsible for its passage in the House.

The following table gives a summary of the bills:

### *Bills Opposed by Our Association*

House Bill 236—Senate Bill 91

Introduced by Mr. Triesler of St. Louis and Senator Elder of St. Louis.

A Bill to license chiropodists. Died on the calendar.

House Bill 295—Senate Bill 209

Introduced by Mr. Comer of St. Louis and Senator Elder of St. Louis.

A Bill to create a board of optometry and license optometrists. Reported unfavorably in the Senate. Reported favorably by the House committee. House refused to consider it for final passage.

House Bill 306—Senate Bill 244

Introduced by Mr. Taylor of Kansas City and Senator Casey of Kansas City.

Requiring physicians to file the death certificate with the local registrar within 24 hours after death of the patient. Reported favorably in the Senate but died on the calendar. Reported unfavorably in the House.

House Bill 360—Senate Bill 232

Introduced by Mr. Parr of St. Charles and Senator Brogan of St. Louis.

A Bill to license chiropractors. Reported favorably in the House after amending to require certain hours of study in several branches. The House refused to consider it for final passage. Reported unfavorably by the Senate committee.

House Bill 859—Senate Bill 755

Introduced by Dr. A. J. Speer of Greenbrier and Senator Belken of Fredericktown.

A Bill to require the state board of health to examine the graduates of legally chartered medical colleges instead of reputable colleges. Passed the House and reported favorably by Judiciary Committee of the Senate. Died on the calendar.

House Bill 905—No Senate Bill

Introduced by Mr. Stockard of Springfield.

A Bill to limit fee for professional calls to \$1.50, office calls to \$1.00 and obstetrical cases to \$10.00. Killed in House Committee on Public Health. No companion bill in Senate.

House Bill 909—Senate Bill 662

Introduced by Mr. O'Brien of St. Louis and Senator Seneker of Mt. Vernon.

A Bill requiring that prescriptions be written in English. Reported unfavorably by committees in both Senate and House.

Senate Bill 663—No House Bill

Introduced by Senator Seneker of Mt. Vernon.

A Bill to place the burden of proof on the surgeon when sued for damages, to show that operation had been performed in a skilful manner and that due care for the safety of the patient had been used. Reported unfavorably by committee and died.

### *Bills Supported by Our Association*

House Bill 79—Senate Bill 389

Introduced by Mr. Wagner of St. Louis and Senator Goodson of Macon.

The Workman's Compensation Act. Passed both houses after much revision and the elimination of state insurance and free choice of physician by injured employee.

House Bill 298—Senate Bill 425

Introduced by Mr. Wagner of St. Louis and Senator Greene of Kansas City.

A Bill to control venereal diseases. Sponsored by the U. S. Public Health Service. Failed to pass either house.

House Bill 581—Senate Bill 255

Introduced by Mr. Lay of Steelville and Senator Greene of Kansas City.

A Bill giving to physicians, surgeons and dentists the right to form mutual associations for protection



against suits for malpractice. (This bill was not actively supported by us nor was it opposed. It was introduced by laymen who wanted to form such an association but could not do so under existing statutes.) Passed by both houses.

#### House Bill 710—Senate Bill 675

Introduced by Mr. Parker of St. Louis and Mr. Cave of Fulton and Senator Livesay of Versailles.

A Bill to provide a fund for the state board of health by placing a tax of \$2 on marriage licenses and providing registration of licenses in the board of health office. Passed by the House. Failed in the Senate.

#### House Bill 711—Senate Bill 676

Introduced by Mr. Parker of St. Louis and Mr. Cave of Fulton and Senator Livesay of Versailles.

A Bill enlarging the powers of the state board of health. Passed by both houses.

#### House Bill 712—Senate Bill 677

Introduced by Mr. Parker of St. Louis and Mr. Cave of Fulton and Senator Livesay of Versailles.

A Bill providing for analysis of drinking water by the state board of health in certain cities. Passed by both houses.

R. M. FUNKHOUSER, Chairman,  
H. E. PEARSE,  
J. FRANK HARRISON,  
M. P. OVERHOLSER, President,  
E. J. GOODWIN, Secretary,  
Committee.

### REPORT OF THE DEFENSE COMMITTEE

The Defense Committee has handled twenty-three malpractice cases. Eleven of these were threats. Three new cases and one new threat were filed since last May.

Three cases were dismissed by the court. One case went to trial and the jury gave a verdict for the physician. Two cases were compromised, leaving seventeen cases still pending.

The nature of the work performed by the Defense Committee precludes general publicity, but at such a meeting as this your attention should again be called to the usefulness of such a committee. Every assistance possible is given the individual who is in trouble. Unjustifiable threats and suits are frequently thwarted in their beginning in a quiet and effectual way which the attorneys are sometimes unable to accomplish.

The interests of the individual are guarded and protected, at the same time keeping constant watch over the welfare of the State Association as a whole and the dignity of the profession. It is indeed a necessary committee whose services any one of us may need at any time. It should be urged that every member avail himself of its cooperation by complying with the by-laws in the matter of prompt payment of his dues.

Unfortunate and embarrassing cases have arisen where a member has been sued but being in arrears with his dues has been deprived of the full benefits. Cases have also occurred where two members are sued jointly, one being paid up and the other in arrears. While the committee has been unable to give financial aid to such an one a special effort has always been made to aid him in every possible way, in securing witnesses, expert testimony, advising and consulting with the attorneys as to the method of handling and questioning witnesses in order to bring out the desired information.

It has been the policy of the committee to be as lenient as possible with the individual in the matter of financial assistance and at the same time to conscientiously consider the welfare of the Association by an honest interpretation of its by-laws.

From time to time small appropriations have been asked to carry on this work and at this time we would

ask that the sum of five hundred dollars be appropriated for the use of the Defense Committee.

Respectfully submitted,

DR. CHARLES E. HYNDMAN, Chairman,  
DR. R. S. VITT,  
DR. PAUL Y. TUPPER.

### REPORT OF COMMITTEE ON BLINDNESS

The Committee for the Prevention of Blindness has accomplished little of moment during the past year.

Their experience with the city and county newspapers of the state at the time of the eclipse of the sun has been so gratifying that we would suggest the use of them in a more organized manner in the future as a medium of warning the laity against dangers to vision and which could be extended to other departments of hygiene.

We found no difficulty in obtaining space for a warning through the influence of health officers as well as the direct request of members of the committee, and in consequence your chairman has heard of only one eclipse blindness in the state from not using smoked glass, whereas in southern Europe in 1912 there were 3,500 cases.

This experience suggests the thought that an official publicity committee on hygiene issuing health bulletins to the health officers or secretary of each county medical society, thence to the city and county newspapers could do a great deal of good at a minimum expense and all such published information would bear the stamp of authority from the Missouri State Medical Association. The laity reads health columns.

Respectfully submitted,

J. W. CHARLES, Chairman.

### REPORT OF COMMITTEE ON VACCINATION

In the absence of any increase in the prevalence of smallpox, or of any change in the vaccinal status of the state during the past year, your committee has no material upon which to base a detailed report. We feel impelled, however, to call attention to the fact that the virtual absence of smallpox among our well-vaccinated troops, on the face of those conditions attending the bringing together of large bodies of men and the waging of war constitutes one more item of evidence as to the protective effect of vaccination, presenting a striking contrast to conditions attending the Franco-Prussian war of 1870-71, which was accompanied by the greatest pandemic of smallpox since the eighteenth century.

JOSEPH GRINDON, Chairman.

### REPORT OF THE TREASURER

#### General Fund

##### Receipts

May 20, 1918.	Amount on hand.....	\$ 6,576.48
May 20, 1919	Receipts from advertising and County Societies .....	14,061.66
May 20, 1919	Interest on daily balance.....	104.80
	Total .....	\$20,742.94

##### Disbursements

May 11, 1918	Transferred to Sinking Fund..	\$ 1,000.00
May 20, 1919	Other expenses .....	13,679.56
	Total .....	\$14,679.56
May 20, 1919	Balance on hand.....	6,063.38
	Total .....	\$20,742.94

**Defense Fund***Receipts*

May 9, 1918	Amount on hand.....	\$2,829.75
May 20, 1919	Interest on daily balance.....	75.80

Total .....\$2,905.55

*Disbursements*

## By Vouchers Account

May 20, 1919	Malpractice suits .....	\$ 550.00
May 20, 1919	Balance on hand.....	2,355.55

Total.....\$2,905.55

**Sinking Fund***Receipts*

May 9, 1918	Amount on hand.....	\$3,709.08
May 11, 1918	From General Fund.....	1,000.00
May 20, 1919	Interest on daily balance.....	144.90

Total .....\$4,853.98

*Disbursements*

1918	None.	
May 20, 1919	Balance .....	\$4,853.98

Total .....\$4,853.98

J. F. WELCH, Treasurer.

**MEMBERS REGISTERED AT THE SIXTY-  
SECOND ANNUAL MEETING, EXCELSIOR SPRINGS**

May 26, 27, 28, 1919

Albers, Edward A., Kansas City  
 Allee, W. L., Eldon  
 Allen, Charles E., Kansas City  
 Allen, W. H., Rich Hill  
 Andruss, Edward, Holden  
 Anthony, Francis R., Maryville  
 Austin, M. B., Brunswick  
 Bacon, Martha M., Kansas City  
 Baird, J. E., Excelsior Springs  
 Baldwin, Paul, Kennett  
 Barnes, F. M., St. Louis  
 \*Barnette, J. Z., Kansas City  
 Barney, R., Chillicothe  
 Barnhardt, D. A., Huntsville  
 Barron, W. Harry, Mine La Motte  
 Baysinger, S. L., Rolla  
 Bedford, S. V., Jefferson City  
 Beedle, Gordon A., Kansas City  
 Beil, J. Wallace, Kansas City  
 Benham, Charles E., Tarkio  
 Benton, A. W., Neosho  
 Berrey, Robert W., Mexico  
 Biggs, M. O., Fulton  
 Billings, J. M., Lebanon  
 Binnie, J. F., Kansas City  
 Blair, Edward G., Kansas City  
 Bliss, Malcolm A., St. Louis  
 Bogart, T. N., Excelsior Springs  
 Bohling, C., Sedalia  
 Bolton, J. W., Warrensburg  
 Bonham, V. Q., Fayette  
 Booth, David S., St. Louis  
 \*Bosserman, D. C., St. Louis  
 Bourn, J. J., Hannibal  
 Bowers, H. E., Galt  
 \*Bradley, U. S., Harris  
 Bradley, W. E., Ethel  
 Braecklein, W. A., Higginsville  
 Breuer, W. H., St. James  
 Bristow, G. M., Princeton

Brown, John Young, St. Louis  
 Brown, C. A., Kansas City  
 Brown, Tinsley, Hamilton  
 Brummall, J. D., Salisbury  
 Brunner, E. E., Carrollton  
 Bullock, E. H., Kansas City  
 Burford, C. E., St. Louis  
 \*Burke, Charles L., Kansas City  
 Burke, John P., California  
 Burkhardt, Edward A., Kansas City  
 Burns, S. S., St. Louis  
 Burrill, C. W., Kansas City  
 Byrne, John I., St. Joseph

Callaway, L. H., Nevada  
 Calvert, Howard A., Smithville  
 Carle, H. W., St. Joseph  
 Carthrae, Lewis, Jr., Corder  
 Castelaw, Rush E., Kansas City  
 Cecil, G. E., Flat River  
 Chalkley, A. J., Lexington  
 Chandler, John F., Oregon  
 Chastain, C. H., Weston  
 Chastain, E. N., Butler  
 Child, Scott P., Kansas City  
 Chowning, Thomas, Hannibal  
 Clark, A. Benson, Joplin  
 Clark, Charles F., Kansas City  
 Clark, Edward H., Kansas City  
 \*Clark, E. R., Columbia  
 Clark, H. M., Platte City  
 Clark, H. J., Excelsior Springs  
 Clark, W. A., Jefferson City  
 Clemmons, Walter M., Kansas City  
 Clendening, Logan, Kansas City  
 Coffelt, Theodore A., Springfield  
 Coffey, G. C., Platte City  
 Coffey, W. H., Kansas City  
 Coleman, H. B., Kansas City  
 Conover, C. C., Kansas City  
 Cook, F. L., Independence  
 Cook, R. F., Carrollton  
 Cook, T. B., Rayville  
 Cordier, A. H., Kansas City  
 Cotton, T. W., Van Buren  
 \*Cowan, H. K., Ash Grove  
 \*Cox, George N., Kansas City  
 Cox, Lee, Springfield  
 Craig, T. B. M., Nevada  
 Crawford, H. S., Harrisonville  
 Crawford, R. O., Eldorado Springs  
 Crews, R. N., Fulton  
 Crockett, James A., Stanberry  
 Crowson, Eugene L., Pickering  
 Cuppaidge, G. O., Brunswick

Davis, A. W., Kansas City  
 Davis, C. B., Nevada  
 \*Davis, George W., Kansas City  
 Delamater, G. A., Rich Hill  
 DeVilbiss, E. F., Kansas City  
 Dinwiddie, T. H., Higbee  
 Dodson, John F., Kirksville  
 Donaldson, Clyde O., Kansas City  
 Doolin, L. R., Gallatin  
 Dowell, George S., Braymer  
 \*Downing, A. R., Merna, Neb.  
 Dumbauld, B. A., Webb City  
 Dunaway, L. T., Eldorado Springs  
 Durham, S. L., Dearborn  
 Dutton, C. K., Moberly  
 Dyer, D. P., Sedalia  
 Dysart, W. P., Columbia

Edmonds, Oliver R., Tina  
 Eggers, G. C., Clayton  
 Elder, A. R., Harrisonville  
 Elkins, C. B., Springfield

\* Guest



- Elmer, W. P., St. Louis  
 Engelbach, William, St. Louis  
 Engman, M. F., St. Louis  
 Epler, J. W., Kearney  
 Ernst, Edwin C., St. Louis  
 Estel, T. F., Altenburg  
 Estill, W. G., Lawson  
 Evans, E. J. E., Kansas City  
 Farrell, R. F., Conception Junction  
 Fassett, Charles Wood, St. Joseph  
 Ferguson, W. J., Sedalia  
 Findley, W. J., Graham  
 Fischel, Walter, St. Louis  
 Fisher, Amos T., Kansas City  
 Forgrave, H. S., St. Joseph  
 Forgrave, L. R., St. Joseph  
 Foster, Hal, Kansas City  
 Foster, Theodore N., Coffey  
 Frankenburger, J. M., Kansas City  
 Freyman, Amos A., Kansas City  
 Freudenberger, H. C., Clarksburg  
 Frick, William, Kansas City  
 Frick, W. J., Kansas City  
 Frischer, Julius, Kansas City  
 Fry, Frank R., St. Louis  
 Fulkerson, W. D., Trenton  
 Fulton, Frank H., Kansas City  
 Funkhouser, Robert M., St. Louis  
 Furnish, J. A., Shelbina  
 Gaines, John J., Excelsior Springs  
 Gayler, W. C., St. Louis  
 Gebhart, Oliver C., St. Joseph  
 Gentry, W. H., Carthage  
 Gerwig, H. E., Downing  
 Gilliland, A. O., Cameron  
 Gillmor, William L., Mount Washington  
 \*Glasscock, S. S., Kansas City, Kan.  
 Good, Clarence A., St. Joseph  
 Goodson, W. H., Liberty  
 Goodwin, E. J., St. Louis  
 Gosney, C. W., Kansas City  
 Grace, H. M., Chillicothe  
 Grace, John F., Excelsior Springs  
 Gradwohl, R. B. H., St. Louis  
 Gray, A. L., St. Joseph  
 Gray, L. L., Unionville  
 Gray, W. W., St. Joseph  
 Gregg, A. Mitchell, Joplin  
 Griffith, C. E., Gallatin  
 Griffith, J. D., Kansas City  
 Grindon, Joseph, St. Louis  
 Hale, Joseph M., Dearborn  
 Hall, C. Lester, Kansas City  
 Hall, O. B., Warrensburg  
 Hall, T. B., Marshall  
 Hamel, A. H., St. Louis  
 Hamilton, Buford G., Kansas City  
 Hamilton, Eugene P., Kansas City  
 \*Hamilton, W. C., Stewartsville  
 Hampton, J. R., Clinton  
 Haning, M. L., Humphreys  
 Harris, J. E., Marshall  
 Harrison, J. F., Mexico  
 Harrison, William, Marshall  
 Harwood, W. G., Dover  
 Hawkins, G. W., Salisbury  
 Henderson, James P., Kansas City  
 Henson, L., Galena  
 Henson, L. L., Ash Grove  
 Herndon, A. S., Camden Point  
 Hertzler, Arthur E., Kansas City  
 Hetherlin, T. Guy, Louisiana  
 Hickok, H. S., Kansas City  
 Higbee, E. H., St. Louis  
 Hill, Roland, St. Louis  
 Hodam, J. A., Excelsior Springs  
 Holdenried, W. E., St. Louis  
 Hornback, J. T., Nevada  
 \*Howell, D. William, Independence, Kan.  
 Hull, E. R., Camden Point  
 Hill, Howard, Kansas City  
 Hume, E. L., New Bloomfield  
 Hunter, James A., Fairfax  
 \*Hutchison, R. C., Kansas City  
 Isley, Lafayette, Excelsior Springs  
 Jackson, Jabez N., Kansas City  
 James, W. J., Excelsior Springs  
 Janes, Vincil, Cameron  
 Jones, George H., Jefferson City  
 Jones, Harry L., Kansas City  
 Jones, K. P., Kansas City  
 Keith, W. E., Kansas City  
 Keller, J. H., Lancaster  
 Kelly, E. H., Kansas City  
 Kerr, H. L., Crane  
 Kessler, E. H., St. Louis  
 Kimbrough, John S., St. Louis  
 Kirk, C. W., Hopkins  
 Knappenberger, George E., Kansas City  
 Knerr, E. B., Kansas City  
 \*Knittle, E. H., Waterloo, Iowa  
 \*Knowlton, Millard, Topeka, Kan.  
 Knox, Andrew C., Kansas City  
 Koch, G. L., Kansas City  
 Koetter, A. F., St. Louis  
 Kuhn, H. P., Kansas City  
 Kimsey, J. T., Lathrop  
 Kyger, Fred B., Kansas City  
 Lake, Noel E., Kansas City  
 Lamar, F. C., Kansas City  
 Lane, H. H., Kansas City  
 Lanyon, W. H., Joplin  
 Lapp, J. G., Kansas City  
 Leonard, H. O., Kansas City  
 Lichtenberg, J. S., Kansas City  
 Lindsay, J. W., Orla  
 Link, J. J., St. Louis  
 Lockwood, T. F., Butler  
 Long, F. B., Sedalia  
 Lorie, A. J., Kansas City  
 Lowe, Frederick M., Kansas City  
 Lowe, H. A., Springfield  
 Lowrey, E., Excelsior Springs  
 Lowry, H. L., Trenton  
 Luten, J. B., Caruthersville  
 Lyter, J. Curtis, St. Louis  
 Mackey, J. F., Kansas City  
 Major, Hermon S., Fulton  
 Mann, J. A., Wellington  
 Manning, D. F., Marshall  
 Mark, Ernest G., Kansas City  
 Marshall, A. H., Charleston  
 Martin, Henry L., Kansas City  
 Marty, L. A., Kansas City  
 Matthews, F. H., Liberty  
 McAlester, A. W., Jr., Kansas City  
 McAlester, A. W., Columbia  
 McCallum, F. M., Kansas City  
 McCandless, O. H., Kansas City  
 McCann, J. P., Warrensburg  
 McComas, A. R., Sturgeon  
 McCormick, F. L., Moberly  
 McDermott, Joseph L., Kansas City  
 McDonald, Chett, Kansas City  
 McElvain, U. G., Kansas City  
 McGuire, Clarence A., Kansas City  
 McMichael, Austin, Rockport  
 Meade, R. H., Kansas City  
 Mendell, E. A., St. Joseph  
 Merriman, C. S., Kansas City

- Miller, Enoch H., Liberty  
 Miller, Hugh, Kansas City  
 Miller, R. M., Belton  
 \*Miller, Wade H., Kansas City  
 Miller, W. C., Labaddie  
 Mills, O. P. M., Grant City  
 Mitchell, Guy B., Branson  
 Moore, H. M., St. Louis  
 Moore, J. G., Mexico  
 Moore, T. E., Trenton  
 Morfit, John C., St. Louis  
 Morrow, B. E., Columbus  
 Morrow, Calvin J., Kansas City  
 Morton, Daniel, St. Joseph  
 Mosher, George C., Kansas City  
 Moss, H. E., Kansas City  
 Mott, J. S., Kansas City  
 Muns, G. E., Montgomery City  
 Murphy, Franklin E., Kansas City  
 Musgrave, John E., Excelsior Springs  
 Myer, Max W., Columbia  
 Myers, J. L., Kansas City  
 Myers, W. S., Kansas City  
 Neal, J. Park, Kansas City  
 Neeley, J. E., Elmo  
 Neff, Frank C., Kansas City  
 Neilson, C. H., St. Louis  
 Newhouse, Stanley, Kansas City  
 \*Newland, A. B., Holden  
 Newlon, C. S., Kansas City  
 Nichols, G. M., Higbee  
 Nifong, Frank G., Columbia  
 \*Nifong, William, Fredericktown  
 Nixon, Charles E., Mount Washington  
 Norberg, George B., Kansas City  
 Noyes, Guy L., Columbia  
 Nulton, Ida M., Livonia  
 Ockerblad, Nelse F., Kansas City  
 O'Kell, O. C., Excelsior Springs  
 Oliver, Evertt A., Richland  
 Osborne, George, Lonejack  
 Overholser, M. P., Harrisonville  
 Owens, J. F., St. Joseph  
 Packwood, S. D., St. Joseph  
 Pare, E. Y., Leeton  
 Park, Henry C., Knobnoster  
 Parker, E. L., Excelsior Springs  
 Parman, D. R., St. Louis  
 Parrish, I. N., Cowgill  
 Patterson, William R., Warrensburg  
 Pearse, Herman E., Kansas City  
 Peters, M. L., Cameron  
 \*Phillips, H. T., Warrensburg  
 Pickett, C. P., Mercer  
 Pitzman, Marsh, St. Louis  
 \*Pohlman, A. G., St. Louis  
 Poorman, Bert A., Kansas City  
 Porter, E. S., Milan  
 \*Postlethwaite, F. M., Kansas City  
 Potter, Caryl, St. Joseph  
 Powers, H. C., Joplin  
 Price, C. C., Kansas City  
 Price, R. P., Triplett  
 Proetz, Arthur W., St. Louis  
 Quigley, Byron T., Mound City  
 Raab, F. Henry, Kansas City  
 Rabenau, W. J., Fordland  
 Ravenel, M. P., Columbia  
 Ravold, H. J., St. Joseph  
 Rawlins, E. V., Appleton City  
 Rea, Robert W., Plattsburg  
 Reder, F. St. Louis  
 Redman, Spence, Platt City  
 Reed, W. M., Kansas City  
 Revelle, C. A., Kansas City  
 Rice, J. T., Excelsior Springs  
 Rice, William, Kansas City  
 Rigdon, T. J., Kennett  
 Rising, Dean S., Kansas City  
 Ritter, C. A., Kansas City  
 Robichaux, E. C., Excelsior Springs  
 Robinson, G. Wilse, Kansas City  
 Robinson, J. F., Nevada  
 Roselle, T. A., Palmyra  
 Rothwell, J. H., Liberty  
 Rowell, Haynie, Kearney  
 Russell, Clarence W., Springfield  
 Russell, Edwin L., Kansas City  
 Sale, Llewellyn, St. Louis  
 Sampson, J. H., St. Joseph  
 Samuels, L., Carrollton  
 Sanders, F. L., Kansas City  
 Sanders, St. Elmo, Kansas City  
 Sawyer, Tom, Kansas City  
 Schauffler, Robert McE., Kansas City  
 Schisler, E., St. Louis  
 Schofield, L. J., Warrensburg  
 Schooley, R. C., Odessa  
 Scott, J. B., Marceline  
 Seba, J. D., Bland  
 Sheetz, Bertha E., Trenton  
 Sheetz, Robert, Orrick  
 Sheldon, J. G., Kansas City  
 Shelton, E. C., Eldon  
 Shelton, William A., Kansas City  
 Sherer, Joseph W., Kansas City  
 Shuck, Lee I., Nelson  
 Shuttee, H. C., West Plains  
 Shy, M. P., Sedalia  
 Skoog, A. L., Kansas City  
 Sloan, R. T., Kansas City  
 Smith, Carroll, St. Louis  
 Smith, C. K., Kansas City  
 Smith, D. O., Kansas City  
 Smith, Elsworth S., St. Louis  
 Smith, J. R., Warsaw  
 Smith, W. J., Paris  
 Songer, H. E., Kansas City  
 Spencer, Floyd H., St. Joseph  
 Spivy, Raymond M., St. Louis  
 Stauffer, W. H., St. Louis  
 Stebbins, N. I., Clinton  
 Stone, Albert B., Lamar  
 Stratton, C. D., Rothville  
 Strother, J. S., Kansas City  
 Suddarth, C. H., Excelsior Springs  
 \*Swope, Opie W., Kansas City  
 Talbott, Hudson, St. Louis  
 Tatum, Harry E., Brunswick  
 Taylor, E. P., Fairfax  
 \*Terry, R. J., St. Louis  
 Tesson, N. A. G., Kansas City  
 Thomason, H. E., Kansas City  
 Thompson, George R., St. Joseph  
 Thornton, J. E., Columbia  
 Titterington, M. B., St. Louis  
 \*Todd, George O., Kansas City  
 Todd, T. B., Adrian  
 Tonge, J. A. G., Wakenda  
 Toothaker, B. W., St. Joseph  
 Trask, C. D., Kansas City  
 Trimble, William K., Kansas City  
 Tuttle, F. W., Blue Springs  
 Twyman, E. D., Independence  
 Tyree, James I., Joplin  
 Van Eman, Fred T., Kansas City  
 Vaughan, John R., St. Louis  
 Vitt, R. S., St. Louis  
 Vogt, William H., St. Louis



Walker, G. D., Eldon  
 Wallace, Charles H., St. Joseph  
 Wallace, W. S., Excelsior Springs  
 Wallendorf, L. H., Kansas City  
 Waterman, J. A., Breckenridge  
 Welch, A. J., Kansas City  
 Welch, J. Franklin, Salisbury  
 Werner, C. H., St. Joseph  
 Wetzell, N. M., Jameson  
 White, W. L., Chillicothe  
 Wilhelm, F. E., Kansas City  
 Williams, P. E., St. Joseph  
 Wills, R. L., Neosho  
 Willson, G. C., Nevada  
 Wilson, C. E., Kansas City  
 Wood, N. P., Independence  
 Woodruff, F. E., St. Louis  
 Woods, R. J., Smithville  
 Woodson, C. R., St. Joseph  
 Wright, J. B., Trenton  
 Zwart, B. H., Kansas City  
 Total 434

## ST. LOUIS MEDICAL SOCIETY

Meeting of May 10, 1919

The meeting was called to order at 8:55 p. m., by the president, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

Dr. G. Canby Robinson introduced the guest of the evening, Dr. I. Chandler Walker of Boston, who addressed the society on the subject of "A Talk on Bronchial Asthma and Allied Conditions Such as Urticaria and Eczema."

Discussion by Drs. Albert E. Taussig, Greenfeld Sluder, William G. Wander, Martin Engman, Charles H. Neilson and John Zahorsky; Dr. Walker closing.

Dr. Koetter moved that Dr. Walker be made an honorary member of the society. Seconded and carried.

Attendance 149.

ARTHUR GUNDLACH, M.D., Assistant Secretary.

## PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Fifty-Ninth Meeting, May 12, 1919

### I. EXHIBITION OF CASES.—A. CASE OF MYASTHENIA GRAVIS.—By DR. T. S. BARNET.

This case is being presented as a possible myasthenia gravis pseudoparalytica. The patient complains of drooping lids and inability to move eyeballs.

Family history and past history are unimportant. Present trouble began November, 1911, with a severe cold. Two days later the patient noticed considerable lacrimation and on the following day, while writing, saw double. Began to have severe frontal headaches at the same time, occurring daily, becoming more severe toward evening, very severe at night, relieved by lying quietly with the eyes closed. Began to wear glasses, one opaque, which was alternately worn on either eye, relieving headache somewhat. At this time noticed also that she could not move eyes. In May, 1914, friends told her that her left eye was closed; this continued. In 1916 the right eye became affected; lids gradually became more ptotic. In the morning her eyes are open fairly wide, as the day advances they droop until at evening time they are nearly closed. Influenza in November, 1918, and a severe cold in January, 1919, made the condition worse.

Patient sleeps a good deal, usually sixteen hours

in twenty-four. Notices that she tires on slight exertion and it is necessary that she lie down.

Would call attention to the drooping eyelids, the palpebral fissure on the left, measuring 3 mm.; on the right, 5 mm. The eyeballs cannot be moved more than a few mm. in any direction. When movement is attempted it is to be noted that the eyeballs oscillate. The pupils react to light and accommodation. The deep reflexes are somewhat increased. No pathological reflexes. The spinal puncture gave a clear, colorless fluid; pressure not increased. Examination negative. Lange showed slight reaction in the parietic zone. Wassermann negative in blood and fluid. Physical examination and the laboratory findings otherwise negative. Roentgen-ray plate of chest reveals no thymic shadow.

The faradic test of muscular response revealed no hyperexhaustibility; the orbicularis and levator palpebrae both giving about normal response.

Still further observation and study are necessary to clear diagnosis. The case was considered of sufficient interest to present at this time.

## DISCUSSION

DR. SCHWAB: This case presents some difficulty in diagnosis. When it was first seen it was thought to be a typical case of myasthenia gravis. After more complete study of the case this diagnosis did not seem to be satisfactory because two very important characteristic symptoms of this disease were not present. One was the absence of the typical myasthenic reaction in the muscles and the other the lack of definite fatigue ability. The bilateral ptosis in this case was the first symptom that suggested the diagnosis of myasthenia gravis, but on inquiry it was found that the patient always had had small eyes, and the thought was suggested that this condition might be a form of a congenital ptosis. The immobility of the eyelids, which seemed at first to be almost complete, was found on subsequent examination to be incomplete. The patient could innervate these muscles to some extent.

Although the case presents many of the characteristics of myasthenia gravis until the presence of the myasthenic reaction of the muscles can be proven the diagnosis must be in doubt.

### B. A CASE OF HEART-BLOCK APPARENTLY AGGRAVATED BY DIGITALIS THERAPY.—By MR. FRED JENNER HODGES.

*History.*—The patient is a man of 53 years whose complaint is: shortness of breath, sleeplessness, fits of coughing and vomiting. He had rheumatism seven years ago and grip three weeks before admission following which the present symptoms began. Treatment consisting of rest and a dark brown medicine three times a day has been continued since the attack of grip. He denies syphilis. His general health has been poor for about three months. Occupation, truck loader.

*Examination.*—General signs of cardiac decompensation. Phenolsulphonephthalein output 29 per cent. in two hours. Signs of aortic, tricuspid, and mitral insufficiency. Pulse very irregular. Many premature beats felt at wrist. Wassermann reaction is negative.

Electrocardiograms made day of entry showed very numerous ectopic beats of right ventricular origin, moderate left ventricular preponderance, reversed "T" wave in leads two and three, greatly delayed A-V conduction with (2:1) two to one block (apparently complete block at times).

*Treatment.*—Complete rest in bed. Veronal and trional grains five each every night. One dose of codeine given for cough.

**Observations.**—Subsequent electrocardiograms showed a persistence of the frequent ectopic beats for four days associated with high degree of A-V block varying from 3:2 to complete block. Peculiar grouping of ectopic beats in threes replacing four normal cycles was noted. With the disappearance of ectopic beats on the fourth day the patient's condition improved. Phenolsulphonephthalein output increased to 38 per cent. No more abnormal ventricular complexes were seen. The auricular rate, 87 on the first day, fell gradually during the patient's stay in the hospital to about 60 at time of discharge. Roughly the degree of block became less with the fall in auricular rate. On the ninth day the auricular rate fell to 55 while the ventricles beat at 45 with a rhythm of their own. Complete block on this day without ectopic beats caused the patient no discomfort. During the third week only occasional auricular beats were blocked and finally there was simply a greatly delayed A-V conduction (0.400 to 0.440 second), in normal rhythm.

In one record, what is usually taken to be the upper limit for A-V conduction time was recorded, a P-R interval of 0.600 second. P-R time on the day of discharge was 0.400 second.

Vagus pressure produced slowing of the rate (right vagus especially, which caused auricular stoppage) and an increase in A-V conduction time to the extent of complete block. Atropin, one-fiftieth grain, subcutaneously caused the block to be lifted temporarily, although the conduction time remained very long, 0.480 second, suggesting some factor other than vagus effect sharing responsibility for the delay.

The "T" wave became upright in all leads before the patient left the hospital.

**Conclusions.**—The early reversal of the "T" wave and its subsequent return to normal form plus the suggestive digitalis history plus lack of evidence of organic lesion (negative Wassermann) all lead one to suspect digitalis poisoning as the reason for the appearance of heart-block in this case. The persistence of a greatly delayed conduction time after administration of atropin and after three weeks of treatment would suggest that the administration of a relatively small dose of digitalis might have sufficed to produce a block in this case.

The patient left the hospital in good condition.

#### DISCUSSION

DR. ROBINSON.—In this case, the question arises, is it a heart-block due to digitalis or are we dealing with an anatomical lesion, causing the disturbance in the conduction?

The evidence in this case indicates that we are dealing with a man who has a damaged conducting system, in which there is further depression by digitalis. There is certainly some relation between the heart-block and the vagus action, because atropin relieves the block. This points toward digitalis as the cause of at least part of the block. I think the improvement shows that the man has a good chance for complete recovery.

It has been an extremely interesting case and the block has cleared up without any continued drug therapy.

#### C. TUMOR FOLLOWING CAMPHORATED OIL INJECTION.—By MR. W. G. WANDER.

Case: Young married woman, aged 23, white. Complaint: Hard, painful lumps in arms and breast. Family history, unimportant. Previous history, unimportant, other than that about six years ago subject was operated on for appendicitis.

At the time of operation, patient was in a hospital and received several hypodermic administrations of camphorated oil, sites of injection were where the lumps now complained of are situated.

During the first year following patient noticed redness over sites of injection, when rubbed. After that began to notice nodules that have been growing continuously since. Since the past year these nodules have become annoying and painful, sharp sticking pain, especially on pressure.

Masses are irregular, firm central larger mass surrounded by similar smaller ones, and running in beaded fashion from central lesions toward the shoulder.

Largest mass, about 1 inch long, three-fourths inch wide and half inch thick, removed from the left arm, just above the external condyle of humerus. Excised mass, firm, yellowish and containing globules of oil in dense fibroconnective capsules. Microscopically, section showed fibroconnective tissue, thickened blood vessels, infiltration of lymphoid, plasma and a few giant cells, almost identical with tumor from paraffine prosthesis described by Heidingsfeldt.

Encapsulated oil globules show parallel behavior to mineral oil in staining reactions.

#### DISCUSSION

DR. DOCK: I think this camphorated oil case is important. Camphorated oil is officially made with cottonseed oil. If the preparations put out for hypodermic use are made with mineral oil the fact should be known. If not so indicated there would seem to be false labeling or substitution. If the injections were made here (they were not) it should be possible to learn what preparation was used in the case reported.

DR. ENGMAN: This type has been going under various names. Some have tumors over the arms and legs and above the ankle. You will find that they develop from one to five years after injection of the camphorated oil. Sometimes the tumors have been excised, in which the diagnosis of tuberculosis and various things has been made. All are probably from the camphorated oil. It is important purely as differential diagnosis. They occur from one to five years after the oil has been used.

#### D. CASE OF PARESIS.—By DR. S. I. SCHWAB.

This case is presented to show the type of delusions in a child which is characteristic of that seen in paresis. This child has syphilis of the nervous system on a congenital basis and is also completely blind. The examination of the blood and spinal fluid showed typical findings of a cerebrospinal syphilis.

Patient is at present at the Children's Hospital having received a number of intraspinal injections.

The type of delusion presented in this case, and it is merely for the delusion that the case is presented, is a characteristic paretic one; the delusions are grandiose in character and represent more the type of childish wishes and desires than would be seen in the adult type. To be noted also is the speech defect which the patient presents: it is of a slurring, uncertain and nasal type. Test phrases are responded to in a way that suggest very much the typical paralytic speech. The delusions in this case might be due, as was suggested by Dr. Veeder, to the normal imaginative activity of a blind child, but it is evident enough that these do not represent the delusions of a normal child in any sense; chiefly because they do not grip the child's attention nor do they apparently afford any definite pleasure to the child when he is telling about them.



The delusions were then illustrated by asking the child questions and the grandiose character was brought out. This case is not presented as a case of juvenile paresis, but simply to show the type of delusion seen in a child with congenital syphilis who at the same time is completely blind.

#### E. CASE OF KERATOSIS.—By MR. SANFORD WITHERS.

A case of chronic, itching, papular eruption of three years duration, in a girl of French-Irish descent. Patient is otherwise normal.

On the pubis and in both axillae are shiny, hemispherical, papules 1 to 3 mm. in diameter, occurring in rows tending to follow the lines of cleavage of the skin, which is pink tinged, thickened, and thrown into folds. No hair is present. Some of the older lesions contain black plugs from one-half to 1 mm. in diameter. The more recent papules are glistening and contain a central punctum. The central plugs are with difficulty extracted and cause bleeding. No fluid escapes from the papules on applying pressure.

Microscopically, tissues from the axilla show the lesion to consist of an acanthosis about the openings of the sweat ducts, with a hyperkeratosis of the duct and its deeper convolutions, plugging the orifice. Keratohyalin debris (homogeneous eosin-staining material) fills the deeper coils, distending them to many times their normal size. The epithelial lining of the gland takes a bright eosin stain. Many of the cells have completely lost their nuclei with the hyalin degeneration. There is a zone or similar change in the collagenous tissue about the gland. The elastic tissue does not stain. About the coil the vessels are sheathed with a round cell infiltration. There is marked edema throughout the whole section. Some of the sweat glands appeared to be normal.

The case is of interest in that the pathologic findings show a distinct correlation with the clinical picture.

Dr. Fordyce in reporting two similar cases classified the lesion as a variety of neurodermatitis, probably of toxic origin.

The disease has not been named.

#### F. CASE OF ANEURYSM.—By MR. C. L. GILLES.

M. P., aged 43, white, American, blacksmith (worked in lead factory before).

Came under observation first in O. P. D., March 7, 1918, complaining of throbbing mass in the lower neck with pain in the back between the scapulae running up into head.

Family history negative.

Previous history, G. C., seventeen years ago; chancre sixteen years ago with secondaries.

P. I.—Onset January, 1917, noticed soreness around the collar bone and at root of neck in front. Pain began to extend into back of neck and then up into head. Pains were jumping; did not run down to arm. No pain in pericardial region. Pain lasted two or three days and would disappear for awhile. A swelling appeared in March, 1918; this swelling measured 5 cm. in diameter and was located in the midline between the sternum and clavicles. It was expansile, rounded and very tender. Heart sounds regular, slightly muffled; no murmurs. In January, 1919, swelling in neck began to get larger and more tender; had been complaining of weakness and pain in neck as before.

Entered hospital Jan. 15, 1919. Eyes react sluggishly to light and accommodation, left larger than right. Few small glands in the posterior triangle. In the region of the upper left chest, upper end of sternum, is a large mass about the size of baseball

visibly pulsating; skin tense. Palpable shock, diastolic. Tumor measures 12 cm. horizontally, 8 cm. vertically and extends from the chest wall 5 cm. Marked tracheal tug. DaCosta's signs present. Heart 14.5 cm. to the left in the fourth, 3.5 cm. to the right. Chest negative. Abdomen: slight scarring of the liver. Old scar on genitals. K. K.'s present, active. Babinski and Romberg positive. Jan. 24, 1919, over the tumor mass is a raised area about 1 cm., which is the point of maximum impulses. There is a dilatation of superficial veins of left shoulder. No complaint on swallowing or breathing. Jan. 20, 1919, skin becoming discolored over mass. Voice slightly husky. Complains of left hand and arm, felt colder than right and somewhat dead. Feb. 5, 1919, tumor measures 22 by 17 cm. across the widest portion. B. P. left arm 90-80, right arm 105-80. Feb. 12, 1919, patient says he can breathe only on back, choking when on either side. Left radial pulse very weak. Over surface of mass are several hazel nut projections which are definitely softer, more elastic and pulsate more forcibly than the tumor as a whole. No dilatation of veins of face, only slight over left chest. No change in voice, no difficulty in swallowing or breathing now. Mass moving up into left shoulder. Feb. 19, 1919, tumor measures 24 by 21 cm., tumor mass seems to move from left shoulder to midline of neck; no further discomfort in swallowing or breathing. Feb. 28, 1919, complains of choking sensation in neck, says he has a little trouble in swallowing. Tumor surface became more nodular. Sputum contains blood; gums are bleeding. No bits of lung tissue or elastic tissue or acid fast. March 14, 1919, trouble in swallowing has disappeared, mass projects out more than before. Right side of neck seems to be more involved than previously; has a sensation of itching in the tumor. March 7, 1919, patient looks pale and anemic. Tumor measures 25 by 22 cm. Several raised areas have appeared and seem to be getting larger. No blood in sputum. Heart and lungs as before. Complains of pain in the left shoulder. March 31, 1919, the skin over one of the raised areas has become eroded and pulsation in fibrin net-work is visible. April 17, 1919, the above area began to ooze, soon stopped. April 19, 1919, above area beginning to bleed freely. Pressure was put by means of gauze dressing and bleeding stopped. On May 2, 10 and 15 patient had severe hemorrhages from the areas of skin abrasion. May 19, 1919, during last three days there has been almost constant oozing. Patient is extremely weak, is being kept under morphin. The size of the aneurysm has decreased somewhat. Areas of abrasion much enlarged, about size of a dollar, plugged with a mass of fibrin and clot of blood which protrudes with the heart beat. No signs of internal hemorrhage. No discomfort from pressure. For the last twelve hours breathing has been of a gasping type, slow, low and deep. Pulse around 100, radial pulse obliterating. Patient died on May 19, 1919.

Wassermann, 4 plus. Urine, granular casts, few white blood cells. Hemoglobin, gradually diminished to 25 per cent. on day of death.

March, 1918, potassium iodid by mouth, 75 grains three times a day, continued only a month. Ten deep injections of bichlorid followed with mercury pills during months of November and December, 1918. January, 1919, arsphenamin 4 grains. From Jan. 15, 1919, to death, getting potassium iodid 15 m. three times a day.

#### 2. PROTEIN SENSITIZATION.—By DR. S. CHANDLER WALKER.

In 1902, Richet found that animals which were injected with a protein had an increased suscepti-

bility to that particular protein and he called this phenomenon anaphylaxis to express its antithesis to prophylaxis or protective effects. The first injection of the foreign protein therefore sensitized the animal. A second injection of a larger amount of protein causes severe symptoms which are called shock. In 1910 Meltzer pointed out that in shock resulting from the injection of foreign protein and in bronchial asthma the symptoms were very similar. Therefore bronchial asthma might be considered as due to protein sensitization.

By means of the skin or cutaneous test it is possible to determine usually whether a person is sensitive or not to a protein. This test consists of inoculating a slight scratch on the skin with the protein and a positive test meaning sensitization consists of an urticarial wheal at the site of inoculation.

In about one-half of the cases of bronchial asthma protein sensitization has been found to be the cause. The most common proteins that cause attacks are as follows: hair of horse and cat; the bacteria *Staphylococcus aureus* and *albus*, the *Streptococcus hemolyans* and *viridans*; the pollens of timothy and ragweed; the foods, egg, milk, potato, meats, cereal grains, especially wheat. With the exception of food proteins patients may be desensitized against all the proteins mentioned by subcutaneous inoculation; it is better to omit the offending food from the diet.

Hay fever has been proven as a sensitization to proteins and the seasonal type is caused by pollens. Timothy is the chief cause of the June and July hay fever and ragweed is the chief cause of the August and September hay fever. Temporary desensitization may be accomplished by inoculations with these pollens.

Frequently eczema or dermatitis is caused by some protein and in a small percentage of cases urticaria and angioneurotic edema are caused by proteins.

#### DISCUSSION

DR. ROBINSON: Dr. Walker's work has done two things which I would like to emphasize:

1. He has studied a disease about which little has been known and shown the biologic law which underlies its causation. Instead of treating asthma with all sorts of drugs, administered in various ways, any of which may help an occasional case or may fail to help many cases, he has shown us a method by which we can stop guessing and use a well-grounded theory as a basis for therapeutics.

2. The point is that Dr. Walker has brought into the problem of asthma the very important factor in pathology, anaphylaxis, or hypersensitization. We are just beginning to see the tremendous importance of hypersensitization. It very likely plays a wide rôle in infectious diseases and a number of other conditions. Longcope has attempted to show causal relation between anaphylaxis and nephritis. Asthma and hay fever have been the most striking diseases in which anaphylaxis causes the symptoms and is where experimental work should begin. I think it has had an excellent beginning in the hands of Dr. Walker, and I am sure it will go on and widen out as his work and that of others proceeds.

We are very fortunate, indeed, to have heard Dr. Walker speak on this work after several years of very careful investigation.

DR. DOCK: Why do you use incisions rather than abrasions? The former is a very radical variation from the method long in use for introducing such material in the body.

DR. ENGMAN: For many years we have recognized the relationship between asthma and urticaria and edema, and some of the so-called vasomotor conditions of the skin. Just what that relationship is has

only been known lately, and I think Dr. Walker is the one to throw more light on this subject than anyone else. Even the textbooks today do not touch on this subject. The dermatologist and every medical man owes Dr. Walker a debt of gratitude for his work on sensitization. A lot of the work in sensitization will be discredited because men will not take the necessary pains and care. There is everything in carrying out the technic. Dr. Wander has been doing work in our skin clinic and has had several interesting cases. It is a very expensive matter to buy proteins and the laboratory work takes a lot of time; you can make only a few investigations in a day. I think it is a great opportunity for all of us to have had this visit from Dr. Walker.

DR. WALKER, closing: My feeling is that scarification (Von Pirquet) causes too much trauma to warrant its use in the skin test. A clean cut with a very sharp bistoury causes very slight trauma and is preferable to the Von Pirquet scarifier.

#### 3. THE EFFECT OF COLD ON THE MUCOUS MEMBRANES OF THE MOUTH AND THROAT.—By MR. SAMUEL B. GRANT.

The purpose of this work is to determine the effect of chilling of the body surface on the vasomotor tone of the oral and pharyngeal mucous membranes, with the idea of making a beginning at throwing some light on the relation of cold to infection.

Temperature was used as the criterion of vascular condition, and thermopiles were constructed which could be applied firmly to exposed mucous membranes, without irritating them or interfering with loss of heat from them. Temperature could be determined to one-twentieth degree C. Whenever the blood supply of the exposed surface beneath the thermopile was diminished, as by vasoconstriction, its temperature should fall, and thus be indicated by the *thermo-galvanometer*.

The subject sat in a room kept at 18 C., mouth open, and thermopiles applied to the exposed mucous membrane and skin (forehead). When the temperature of the skin and mucous membrane had become constant, he was chilled by removing the loose garments in which he was wrapped, and turning an electric fan on his back. Incident on this, the temperature of the skin and mucous membrane was found to fall. When it ceased falling the subject was again wrapped. The skin temperature then always returned to normal and the mucous membrane temperature almost to normal. In six instances of chilling with the fan there was a fall in mucous membrane temperature, the average maximum fall being 0.81 C., developed in six and a half minutes.

That the fall in temperature was not due to decreased blood temperature or blood pressure was shown by control experiments, which showed a slight rise in these on chilling. It was found, however, that chilling increased the respiratory exchange, and furthermore, that increasing respiratory exchange slightly lowered the mucous membrane temperature, by increasing the amount of cold air passing over the membranes. To rule out this factor, respiratory rate was controlled by having the subject breathe with a metronome, and depth by thoracic and abdominal pneumographs writing on a smoked drum within sight of the subject. He assumed a certain increased volume of respiration at the beginning of the experiment, and maintained it at this level throughout.

Seven experiments were performed according to this plan, and in all a fall in mucous membrane temperature followed chilling. The average maximum fall in four such experiments was 1.42 degrees C., reached in eighteen and four-tenths minutes. The oropharynx,



nasopharynx, palate and faucial tonsil all reacted in this way. Observation of the mucosa showed blanching on chilling.

In a case of chronic pharyngitis there was no fall of temperature on chilling. The mucous membrane vessels reacted, however, to amyl nitrite, there being an increase in temperature when it was inhaled. In another case of chronic pharyngitis there was no blanching observed when the surface was chilled.

These experiments show that chilling the body surface is followed by reflex constriction of the oral and pharyngeal mucous membrane vessels, and disprove the former false assumption that cutaneous chilling was followed by congestion of these membranes.

#### DISCUSSION

DR. OPIE: The time-honored conviction that exposure to cold renders the respiratory tract susceptible to infection is supported by experimental evidence which shows that animals exposed to cold have increased susceptibility to bacterial invasion. How cold diminishes resistance to infection has remained quite vague. This study is the first definite step in the solution of the problem. A necessarily brief presentation scarcely indicates how carefully these experiments have been performed and how fully they have been controlled.

#### 4. THE RAPIDITY AND PERSISTENCE OF THE ACTION OF DIGITALIS ON THE HEART.—By DR. G. CANBY ROBINSON.

The study of digitalis to be reported was made on patients suffering from a form of cardiac disorder which is so influenced by digitalis that it could be definitely determined when the drug begins to take effect, and in most cases when its action ceases. Digitalis was administered usually in one large dose in the form of the tincture which had been assayed by the cat method of Hatcher and Brodie, and was given my mouth. The dose was determined by the method described by Eggleston, and 0.15 c.c. was given per pound of body weight. In a few instances this dose was reduced on account of certain clinical findings.

The cases all showed auricular fibrillation or auricular flutter as determined by electrocardiograms and in all the ventricular rate was abnormally high. No cases were under the influence of digitalis when the massive doses of digitalis were given. The doses usually ranged from 15 c.c. to 25 c.c. The effect of digitalis was usually determined by the rate of the ventricles, counted at frequent intervals before and after the administration of the drug by auscultation over the heart. The radial pulse rate and the pulse deficit (the difference between the ventricular and radial rate), were also followed and charted. The two cases of auricular flutter were the only exceptions to this procedure. Twenty-six cases were studied and tabulated. In sixteen cases the observations were made at intervals sufficiently frequent after the drug was given to determine accurately the time when the digitalis became effectual. This was judged by a slowing of the ventricles below the rate seen before the digitalis was given followed by further slowing and pronounced digitalis effect, or in two cases by the disappearance of auricular flutter. In these sixteen cases the drug became effectual in every instance in from two to five hours.

The maximum effect of digitalis, as judged by the slowest ventricular rate was usually observed in from fifteen to twenty-six hours. This was observed in nineteen cases. In six cases the maximum effect occurred in from six to nine hours, and in one case no statement regarding the maximum effect can be made.

In thirteen cases the heart remained under the influence of digitalis from four to twenty-two days, or an average of nine days and eight hours. In one case the effect lasted but one day while in the others no definite statement is justified, because subsequent doses of the drug were given before the effect of the first dose had disappeared or as in one case the patient died.

The study of these cases demonstrates that a single large dose of the tincture of digitalis administered by mouth affects the heart soon after administration, and at relatively uniform time, indicating that the drug is well absorbed, at a uniform rate. It also demonstrated that the maximum effect is usually obtained in about twenty-four hours and generally continues to be effectual for nearly ten days.

#### DISCUSSION

DR. DOCK: This is a very important and interesting work of Dr. Robinson's. However, it is so late that I think an extensive discussion would be out of order. I would like to point out one clinical point that might appeal to those who have carried out the older fashion. Doses that give results that Dr. Robinson has shown affect the patient very much as the small doses do. That is, the improvement lasts just as long. The difference is, however, that the slow method will take the patient from four to ten days and sometimes longer to get the effect. Giving the massive doses the patient gets over the incompen-sation quickly. As everybody knows, formerly we gave the patient a full dose of morphin in order to permit sleep. With this method, it is not necessary and the discomfort and digestive disturbances of morphin are entirely obviated.

#### CARROLL COUNTY MEDICAL SOCIETY

Carroll County Medical Society was called to order June 11 by Dr. R. F. Cook, president. The following responded to the roll call: Drs. Tonge, Atwood, Cook, Nevins, Samuels, Edmonds and Brunner.

Cases of influenza were reported and discussed by all present and some very interesting features were brought out.

The following committee was appointed to draw up resolutions of respect for Dr. Ella T. Colby, Dr. M. W. Craton and Dr. W. C. Baird, deceased: Dr. Lynn Samuels, Dr. William Atwood and Dr. E. E. Brunner. The committee was requested to send one copy to the bereaved families, one to the local papers, and one to THE JOURNAL OF THE MISSOURI STATE MEDICAL ASSOCIATION.

The meeting was adjourned to meet on the second Wednesday in July.

H. E. BRUNNER, M.D., Secretary.

#### DAVISS COUNTY MEDICAL SOCIETY

The Daviess County Medical Society met at Gallatin, Tuesday, May 13, 1919, with the following present: Drs. J. D. Dunham, L. R. Doolin, G. D. Harris, A. C. Minnick, P. L. Gardner, J. L. Reich, N. M. Wetzel and Wooden.

Dr. Jacob Geiger of St. Joseph addressed the meeting on diagnostic points in surgery. He handled his subject in a very able and interesting way and all those present expressed themselves as having enjoyed his paper very much.

A very interesting clinic was presented by Dr. N. M. Wetzel and everybody present took an active part in the meeting.

The following officers were elected to serve for the year 1919: President, J. D. Dunham, Pattonsburg;

first vice president, L. R. Doolin, Gallatin; second vice president, A. G. Minnick, Lock Springs; third vice president, G. D. Harris, Jamesport; secretary-treasurer, N. M. Wetzel, Jameson; delegate, N. M. Metzel, Jameson; alternate, P. L. Gardner, Gallatin.

The meeting closed with an invitation from President Dunham to meet with him in July at Pattonsburg at which time Mrs. Dunham will serve a 6 o'clock dinner.

N. M. WETZEL, M.D., Secretary.

## MONTGOMERY COUNTY MEDICAL SOCIETY

Montgomery County Medical Society met May 23 and elected officers for the balance of the year as follows: Dr. Thomas H. Diven, Wellsville, president; Dr. George E. Prewitt, Wellsville, secretary. Dr. George E. Muns, Montgomery City, remains treasurer for this year, and was elected delegate to the annual meeting at Excelsior Springs, with Dr. John A. Bellamy, Bellflower, as alternate. Those present at the meeting were: Drs. Thomas H. Diven, Wellsville; John A. Bellamy, Bellflower; David Nowlin, Montgomery City; George E. Muns, Montgomery City; George E. Prewitt, Wellsville.

G. E. MUNS, M.D., Secretary.

## ST. LOUIS COUNTY MEDICAL SOCIETY

St. Louis County Medical Society met at Webster Groves, June 11, 1919. In the absence of the president and vice president the society was called to order by the secretary, and Dr. Townsend was elected temporary chairman. Those present were: Drs. Townsend, Corley, Eggers, Cape, Dunnivant, Westrup, O'Malley, J. H. Armstrong, Conway, Baker, Miles, North. The minutes of the previous meeting were read and approved.

The application for membership of Dr. David C. Bosserman was presented but it appearing from a letter of the doctor accompanying the application that he has been recently discharged from the Army and has not yet decided whether he will locate in the county or not, on recommendation of the board of censors the application was laid over and the secretary instructed to write the doctor advising him of the action of the society and requesting him to notify it when he has arrived at a decision as to his future location, only residents or practitioners of the county being eligible for membership.

Dr. Armstrong reported a case of extreme acidosis following an operation of gastro-enterostomy, with suppression of urine for seventy hours and absence of radial pulsation for ninety hours, followed by recovery. After discussion of this case and other cases which were presented, the society adjourned.

A. CONWAY, M.D., Secretary.

# THE TRUTH ABOUT MEDICINES

## NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1919, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**ATREOL.**—An aqueous solution containing as its principal constituent the ammonium salts of a mixture of organic acids containing nitrogen in the sul-

phonic radical which results from the action of sulphuric acid on certain petroleum distillates. Atreol is applied locally for promoting the absorption of swellings and effusions in contusions following fractures, etc. It is claimed to be useful in dermatologic and gynecologic practice. It may be used in aqueous solutions, ointments and suppositories. The Atlantic Refining Co., Philadelphia, Pa. (*Jour. A. M. A.*, May 17, 1919, p. 1463).

**GILLILAND'S CONCENTRATED AND REFINED DIPHtheria ANTITOXIN.**—Marketed in ampules containing 1,000, 5,000 and 10,000 units each. For a description of Diphtheria Antitoxin, Concentrated, see New and Nonofficial Remedies, 1919, p. 280. Gilliland Laboratories, Ambler, Pa.

**GILLILAND'S CONCENTRATED AND REFINED TETANUS ANTITOXIN.**—Marketed in ampules containing 1,500, 3,000 and 5,000 units each. For a description of Tetanus Antitoxin, Concentrated, see New and Nonofficial Remedies, 1919, p. 266. Gilliland Laboratories, Ambler, Pa.

**GILLILAND'S ANTIPNEUMOCOCCUS SERUM, TYPE I.**—Marketed in vials containing 100 c.c.; also in double ended vials containing 50 c.c. each, with a gravity injection apparatus for intravenous injection. For a description of Antipneumococcus Serum, see New and Nonofficial Remedies, 1919, p. 271. Gilliland Laboratories, Ambler, Pa.

**GILLILAND'S SMALLPOX VACCINE.**—Marketed in sealed capillary tubes in packages containing two tubes each. For a description of Vaccine Virus, see New and Nonofficial Remedies, 1919, p. 274. Gilliland Laboratories, Ambler, Pa.

**GILLILAND'S ORIGINAL TUBERCULIN, "O. T."**—Marketed in 3 c.c. vials. For a description of Old Tuberculin, see New and Nonofficial Remedies, 1919, p. 277. Gilliland Laboratories, Ambler, Pa. (*Jour. A. M. A.*, May 17, 1919, p. 1463).

**BARBITAL-ABBOTT TABLETS, 5 GRAINS.**—Each tablet contains 5 grains of barbital-Abbott (see New and Nonofficial Remedies, 1919, p. 82). The Abbott Laboratories, Chicago.

**PROCAINE HYPDERMIC TABLETS, ¼ GRAIN.**—Each tablet contains ¼ grain of procaine-Abbott (see New and Nonofficial Remedies, 1919, p. 30). The Abbott Laboratories, Chicago.

**PROCAINE-ADRENALIN HYPDERMIC TABLETS.**—Each tablet contains procaine-Abbott ⅓ grain and adrenalín 1/2500 grain (see New and Nonofficial Remedies, 1919, p. 30). The Abbott Laboratories, Chicago (*Jour. A. M. A.*, May 17, 1919, p. 1463).

**PROTARGENTUM-SQUIBB.**—A compound of gelatin and silver containing approximately 8 per cent. of silver in organic combination. It has the actions and uses of silver preparations of the protargol type (see New and Nonofficial Remedies, 1919, p. 3007). Protargentum-Squibb is used in 0.25 to 5 per cent. aqueous solutions, prepared freshly as required. E. R. Squibb and Sons, New York (*Jour. A. M. A.*, May 24, 1919, p. 1543).

**ANTIMENINGOCOCCIC SERUM (COMBINED TYPE) (GILLILAND).**—Marketed in 15 c.c. ampules and in 15 c.c. and 30 c.c. cylinders with attachments for spinal administration. For a description of Antimeningococcus Serum, see New and Nonofficial Remedies, 1919, p. 270. Gilliland Laboratories, Ambler, Pa. (*Jour. A. M. A.*, May 24, 1919, p. 1615).

## PROPAGANDA FOR REFORM

**PHOSPHORUS METABOLISM.**—The more recent investigations on digestion and absorption all point to the probability that phosphorus from the digestive tract



reaches the general circulation only in the form of inorganic phosphates and that all organic phosphorus compounds are synthesized in the body cells. This is in support of the conclusion of the Council on Pharmacy and Chemistry in forming an estimate of the therapeutic potency ascribed to preparations of organically bound phosphorus, such as lecithin, glycerophosphates, phytin, maleic acid and phosphoproteins. All the newer researches give no indication that the body is dependent on a ready made supply of phosphatid (phosphorized fat) in the diet to maintain normal nutrition (*Jour. A. M. A.*, May 3, 1919, p. 1294).

**IODEX.**—Iodex is a black ointment marketed by Menley and James with the claim that it is a preparation of free or elementary iodine minus the objectionable features that go with free iodine. As a result of an investigation of Iodex made in the A. M. A. Chemical Laboratory, the Council on Pharmacy and Chemistry reported in 1915: 1. The composition is incorrectly stated; the actual iodine content is only about half of that claimed. 2. The action of Iodex is not essentially that of free iodine, although that is the impression made by the advertising. 3. The assertion that iodine may be found in the urine shortly after Iodex has been rubbed on the skin has been experimentally disproved. As the manufacturers of Iodex still persist in their claim that the product contains free iodine, the A. M. A. Chemical Laboratory has again examined Iodex. It reports that Iodex gives no test for free iodine, or, at most, but mere traces (*Jour. A. M. A.*, May 3, 1919, p. 1315).

**TWO MISBRANDED NOSTRUMS.**—Bull's Herbs and Iron Compound was a weak alcoholic solution containing iron, phosphates, sugar and vegetable derivatives, among which were quinine, red pepper, gentian and podophyllum. It was falsely and fraudulently represented as a remedy for weak nerves, ailments peculiar to women, scrofula, rickets, liver, kidney and bladder diseases, etc. Effervescent Granulare consisted of over 13 per cent. sodium bicarbonate, 61 per cent. of sugar, 3 per cent. of borax, and 17 per cent. potassium bitartrate. Though invoiced as "Eff. Magnesia" it contained no magnesia. Both were declared misbranded (*Jour. A. M. A.*, May 3, 1919, p. 1316).

**COLLOSOL MANGANESE.**—Stephens, Yorke, Blacklock, Macfie, Cooper and Carter report in the *Annals of Tropical Medicine and Parasitology* the results of their investigation for the English government of Collosol Manganese conclude that Collosol Manganese in the dose used is of no value in the treatment of simple tertian malaria (*Jour. A. M. A.*, May 3, 1919, p. 1318).

**HELPFUL HINTS FOR BUSY DOCTORS.**—A comparatively recent issue of the *International Journal of Surgery* has an editorial on "The Questionable Etiology of the Present Epidemic," signed "G. H. Sherman, M. D." It was to the effect that one can best immunize against influenza by using "a combined vaccine containing the influenza bacillus, pneumococci, streptococci, the *Micrococcus catarrhalis* and staphylococci." In the advertising pages of the same issue was an advertisement of "Influenza Vaccine No. 38," which "Will abort Colds, Grippe, Influenza and Pneumonia," and which was made by "G. H. Sherman, M. D." The vaccine contained the various bacilli and cocci mentioned in the G. H. Sherman editorial. One wonders if in succeeding issues of the *International Journal of Surgery* one may look for editorials by the proprietors of Bellans, Phenalgin and

other products advertised in the publication (*Jour. A. M. A.*, May 10, 1919, p. 1372).

**ADMINISTRATION OF ARSPHENAMINE.**—The U. S. Public Health Service has issued a circular concerning the dilution and the rate of administration of arspenamine solutions. A study as to the cause of the disagreeable results following the use of the various preparations of arspenamine has indicated that most disagreeable results are not inherent in the preparations but are produced through faulty steps in the administration of the remedy, chiefly from the use of a too concentrated solution and by too rapid administration (*Jour. A. M. A.*, May 10, 1919, p. 1372).

**LANE'S ASTHMA CURE.**—The A. M. A. Chemical Laboratory reports that Lane's Treatment, double strength, for Hayfever and Asthma (formerly called Lane's Asthma Cure) was found to be essentially a solution of calcium iodide, alcohol and water, with vegetable extractives and sugar. It contained 3.96 Gm. of anhydrous calcium iodide, or about 2.5 grains per dose. Iodides have been used for years in the treatment of certain forms of asthma. Under careful supervision the use of iodides in selected cases of asthma may give decidedly satisfactory results. Self-dosing with iodides, however, is by no means free from danger (*Jour. A. M. A.*, May 10, 1919, p. 1386).

**TYREE'S ANTISEPTIC POWDER.**—An advertising leaflet for Tyree's Antiseptic Powder recently received by a physician is devoted largely to a report of a bacteriologic examination of the Tyree preparation. The physicians who receive this advertising material might easily overlook the fact that the reported bacteriologic tests were made in 1889 and that the investigation of the Council on Pharmacy and Chemistry in 1906 brought out that the examination applied to a product differing radically in composition from that of the preparation now marketed. The Council found that although the Tyree preparation was advertised as a mixture of borax and alum, it was essentially a mixture of zinc sulphate and boric acid. Here then we have a manufacturer publishing in 1919, in behalf of a certain product, tests that were made in 1889 with a product of different composition although of the same name (*Jour. A. M. A.*, May 17, 1919, p. 1482).

**PEPTENZYMES.**—Peptenzyme was reported on by the Council on Pharmacy and Chemistry along with a number of other products of Reed and Carnrick in 1907. The report "Reed and Carnrick's Methods" announced that none of the products examined were eligible for New and Nonofficial Remedies. The following is an abstract of the report on peptenzyme: Peptenzyme elixir and powder are said to contain "the enzymes and ferments of all the glands which bear any relation to digestion"; therefore, the peptic glands, pancreas, salivary glands, spleen and intestinal glands. The preparations are said to be "not chemical extracts, but pure physiologic products." Apparently peptenzyme powder consists of the glands, dried and powdered, while the elixir is an extract. It is stated that these preparations digest proteids, starch and fat, and in addition stimulate and nourish the digestive glands, and that the ferments in these preparations do not interfere with or digest one another. Examination by the Council showed that these preparations were practically devoid of any power to digest proteids or fat when tested by the U. S. P. method. The claim that the product contained ferments which would not show this activity in the test tube, but be-

(Continued on page xxiii)

# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

Volume XVI

CHICAGO, ILL., AND ST. LOUIS, MO., AUGUST, 1919

NUMBER 8

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3529 Pine St., St. Louis, Mo.

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### ORIGINAL ARTICLES

#### OSTEO-SARCOMA—ROENTGEN-RAY TREATMENT—A CASE REPORT

E. B. KNERR, M.D.  
KANSAS CITY, MO.

The various bone tumors may be diagnosed by the roentgen ray. The salient points briefly are as follows: First determine by radiographs whether the tumor is invading the surrounding tissues, destroying their identity. If so the tumor is malignant. Hitherto the pathologist has been relied on to determine this point by making microscopical sections of an excised portion of the tumor. Such excisions are known to be highly provocative of metastasis and therefore should be condemned if a diagnosis can be arrived at by other means.

In case the tumor is nonmalignant it will be found to be limited beyond the new bony deposits by a clearly defined border. It is non-invading and does not destroy the surrounding tissues. Such a tumor may be excised with impunity. However, a course of deep radiotherapy should follow as a precautionary measure, for "no one is wise at all times." This will inhibit further growth and will cause the absorption of such portions of the tumor as may have been left by the surgeon.

But what are the radiographic characteristics which shall determine as to whether a bone tumor should be designated as "invading" or "limited"?

A clearly established feature of bone tissue, physiological and pathological as well, is that the bone substance is being continuously produced and absorbed. If this process be conducted in a normal manner under a normal balance of supply and elimination, the result is normal physiological bone. But if abnormal stimulation to cell multiplication is set up because of injury or the presence of inflammatory toxins or inherent neoplastic tendencies, a tumor may result. The cell growth in mass may

be held in control by limiting bounds of connective tissue in which case the new growth is benign or nonmalignant. The radiograph will show these definite limits of the tumor with remarkable clearness, as in exostoses, osteophytes, osteochondromas and osteocysts. But when the invading bone cells of the tumor grow wild, break all bounds of restraint, proliferate outward from a center, giving the suggestion in the radiogram of a burst of sun rays or an exploding bomb, the condition is always one of malignant osteosarcoma. When this latter picture presents, what shall be done?

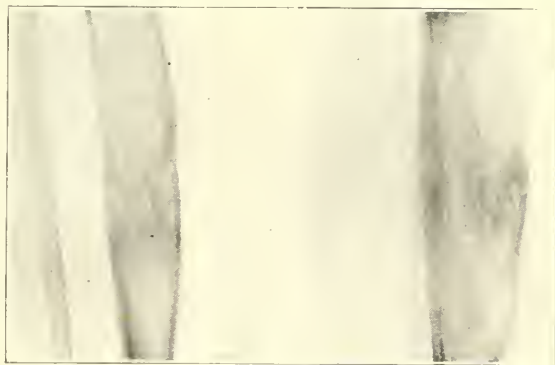


Fig. 1.—Note disintegration of bone tissue and proliferation rays of new bone. (May 4, 1918.)

Hitherto the immediate verdict has been to amputate if the part affected be a limb or other removable part of the body, and the sooner the better, with the hope of limiting the tumor cells to the part affected. But to so mutilate the young is a sad necessity, indeed, for these conditions are most frequent in early life.

Such a case came into the writer's practice during the past year.

P. M., a girl, 13 years of age, of good family, farmer's daughter, suffered a blow, by a fall on the anterior portion of the left tibia some time in August, 1917. The wound healed readily but the bone felt sore for a number of weeks. At Christmas time, 1917, while at



play a boy companion kicked the same tibia and as a result the bone began to enlarge and became painful. A radiograph made May 4, 1918, presents the condition as shown in Figure 1. Here we have the areas of bone absorption distributed through the shaft somewhat similar to septic osteomyelitis, but the shaft is bulging, indicating a rather rapid replacement of bone as well as the formation of

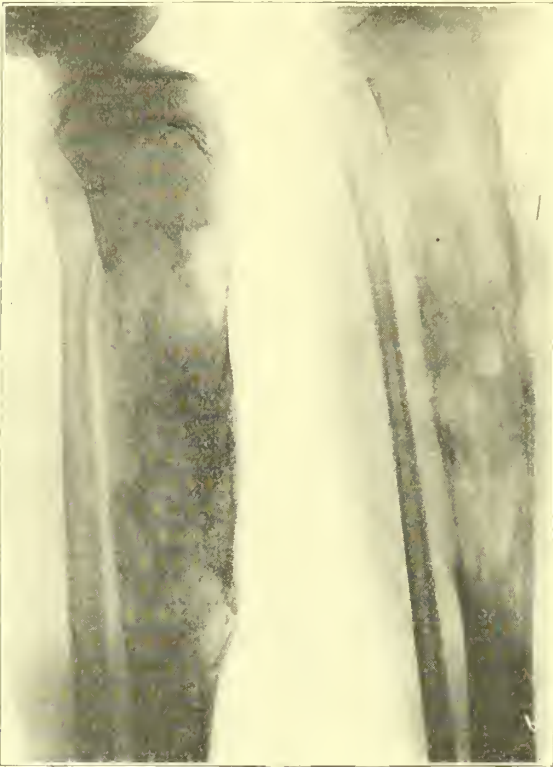


Fig. 2.—Note absorption of cortex of shaft and medulla. Also note ray proliferation of bone tissue in the tumor. (July 14, 1918.)

areas of absorption. However, note especially the rays of new bone shooting out from the margin and perpendicular to the line of the shaft, streaming right through the periosteum and surrounding tissues, with no limiting line of demarkation, wild, invading daggers of malignancy. Shall the limb of this bright little girl be sacrificed to amputation? We may be mistaken in our diagnosis. The physicians in charge take a little more time with palliative measures, hot packs, etc., but the pains persist and the leg grows worse rapidly. It is concluded to explore for pus, but an incision yields only a "bloody, spongy discharge," as it was described. Soon crutches must be resorted to as the girl cannot bear her weight on the affected leg. July 14 she returned for another radiograph (Fig. 2). Note the wide destruction of bone that has taken place in the two months

since the first plate was made, but also the wide proliferation of the osseous tissue.

The conclusion is now definite for osteosarcoma and amputation is considered by the surgeons. However, at our suggestion it is concluded to give the ray a trial. Accordingly, from July 16 to 24, the limb was rayed daily in various positions from knee to the foot each day giving about 40 millampere minutes at 5 to 6 inch spark gap, filtered through 5 millimeters of sheet aluminum, and with the target of the Coolidge tube at a distance of 9 inches.

The patient was then allowed to return home with instructions to report back in three weeks. August 17 she returned without her crutches and greatly improved. Four more exposures were administered on consecutive days on different aspects of the leg. September 6 the patient returned for another series of treatments.



Fig. 3.—Note return of cortex of shaft and organization of bone repair. (Oct. 23, 1918.)

She was so much improved that she no longer limped and the leg felt well.

October 22 she returned with a history of having had a severe toothache in the left lower jaw. To relieve this a dentist had extracted the second molar. A radiograph of the jaw showed an area of bone absorption under the unerupted third molar. This was the real seat of the trouble, and not the second molar as the

dentist had supposed. The extraction of this second molar had been attended by a hemorrhage which was difficult to control and persisted for a day or two. Our conclusion was that here we were having a metastasis in the jaw from the leg tumor. Three series of treatments similar to those administered to the tibia were given. A radiograph of this jaw made the following Jan. 21, 1919, showed normal bone conditions returning in the eroded area and the patient was suffering no further pain in the jaw.

Jan. 23, 1919, patient returned with a degree or two of temperature above normal, though prior to that time she had been gaining in weight

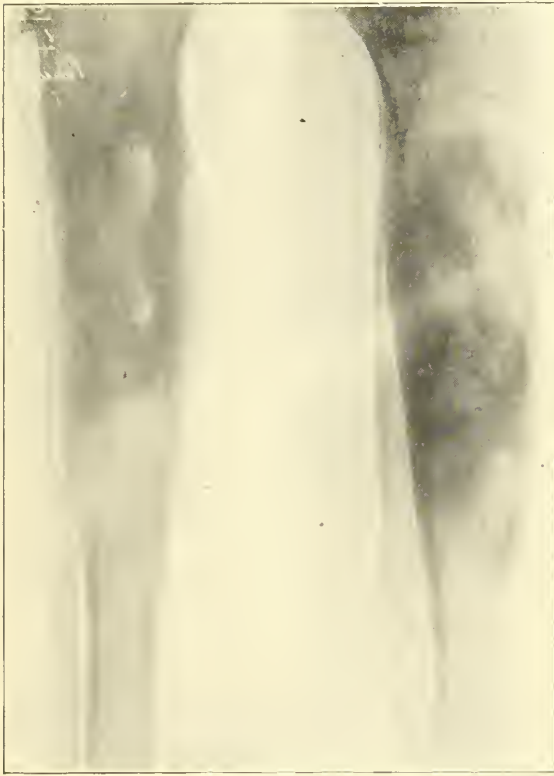


Fig. 4.—Note organization of healthy bone and absorption of superfluous bony tissue. (Jan. 1, 1919.)

and feeling well. She gave no account of having had influenza, which was very prevalent at that time, but we thought it advisable to make a radiograph of her chest. Distributed at wide intervals through the lungs were a number of bright, small shot-like spots, interpreted as lime-filled lymph nodes and our fears were that they were metastatic centers from the tumors of the tibia and jaw.

February 14 a second plate was made of the chest and the limy nodules were found to be much more numerous but none of them larger than in the first plate. The chest was now rayed on three successive days, 40 milliamperes min-

utes each day, and the patient allowed to go home.

She did not return again until April 1. She had lost very perceptibly in weight and appearance. Radiographs of the chest now showed the lungs shot full of the calcareous nodes, none of them larger than ordinary shot and distributed at rather regular intervals. The patient refused further treatments and I did not see her again until May 15, this month. Meanwhile, she had suffered a severe siege of the mumps which left a conspicuous hard tumor mass under the previously affected jaw. A radiograph showed the bone rapidly disintegrating. A series of exposures over the jaw on three successive days was administered, each day fifty milliamperes minutes at 6 inch spark gap, 9 inches to target, and 3 millimeters sheet aluminum filter.

The affected tibia was presenting a small, pulsating tumor like an aneurysm under the skin, easily compressed. This was likewise exposed to the ray each day.

May 22 the patient returned. Tumor of the jaw had markedly receded, permitting much better function. Likewise the pulsating tumor of the tibia had diminished. A radiograph of the chest now showed the shot-like tumors of the lungs somewhat enlarged and some assuming angular shapes but apparently not increased in numbers.

Research Hospital.

#### DISCUSSION

DR. L. A. MARTY, Kansas City: Bone sarcomas are supposed to follow some trauma but just how the action of trauma is concerned in the matter we do not understand. These bone tumors are most frequently found before the thirtieth year and are usually of rapid growth, although some cases have been reported of twenty or even thirty years standing. Most of them metastasize early, more especially the soft and cellular varieties and metastasis is usually by the blood stream. In those cases where swollen lymph nodes are found, they will commonly be found to be simply inflammatory.

The selective point of metastasis is usually the lungs and the metastases appear in the lungs as multiple nodules, superficial pleural growths, bulky pleural or pulmonary tumors. The lung symptoms may be slight but frequently are suggestive of tuberculosis.

Very extensive intravascular growths may occur. Hektoen reported one which almost filled the right ventricle. Operative trauma may have much to do with metastasis. Benign giant-cell sarcomas of the epulis type occur mostly about joints and in other cancellous tissue such as the alveolar processes.

The appearance of this tumor tissue is reddish jelly-like. This type of growth which is considered benign may absorb the shaft and the periosteum may lay down a shell of new bone. They do not, however, produce bone and they do not metastasize.

The prognosis of sarcoma of the shaft of the bone is usually bad because subjects under 20 years withstand the progress of malignant tumors very poorly. Gross found the average duration of life, with operation, of the round-cell type of tumor at 18 months,



of the spindle-cell type at 20 months, and of the osteod periosteal tumor at 92.7 months. He says practically all cases of round-cell and spindle-cell periosteal tumors eventually die of the disease. With osteod sarcomas about 66 per cent. die; and yet these are classed as benign growths.

Recent statistics show slightly better results, depending on the bones affected and the type of tumor. The farther the growth is from the body the better the chances from amputation.

No doubt to every man in this room in listening to Dr. Knerr's paper, the thought came, "If we have such results from the roentgen treatment, why wait?—why not have immediate amputation?" That can best be decided by going over some of the statistics of our old masters in surgery and see what results they have had from the treatment by amputation. We find a few favorable reports but taking the thing as a whole, the outlook is very dark indeed from this class of disease when surgery is considered alone.

Kocher collected 48 cases of sarcoma of long bones which were regarded as cured. Of these the radius was the seat of the growth in 4, ulna 1, humerus 10, femur 23, tibia 12. Coley collected 57 cases of apparent cures, 30 of the "myelogenous" type, 15 periosteal, 12 undetermined. Butlin collected 18 cases of periosteal sarcoma of humerus which survived operation, but only one remained well after three years. Of 68 cases of periosteal sarcoma of the femur only one doubtful case remained well three years. Yet McCosh had 3 recoveries of spindle-cell sarcoma of the femur among 7 cases. Bloodgood reports 26 medullary giant-cell sarcomas all living; 18 inoperable malignant sarcomas; 34 high amputations without a single cure, and 6 permanent cures (periosteal osteosarcoma 3, myxochondrosarcoma 2, fibrosarcoma 1).

Rheinhardt reported 7 permanent cures (8 to 12 years) out of 54 cases, including 4 round-cell tumors, of tibia 2, and humerus 2. Coley collected 62 cases of sarcoma of the clavicle of which 6 recovered, but in many the result was not known. Nancrede could find no cases of recovery from sarcoma of the scapula. The interscapulothoracic amputation, while comparatively effective for benign tumors of the humerus, appears to have succeeded in curing only one advanced malignant tumor of the humerus (Berger's case) (Jeanbreaux, Riche).

The surgical treatment of these conditions has been in use for many years, with results such as we have just related. Now, then, if surgery is never sure and offers only possibly an extension of life for a very few months, I think we are entirely justified in trying some other method of treatment; among these might be mentioned the roentgen-ray, radium, and possibly some heat treatment.

The roentgen ray has been used for a number of years. We find cases of cure on record. We find others where all symptoms have been relieved, all suffering relieved and the patient goes on to an easy death. Radium has been a distinctive factor in some of the well circumscribed tumor cases. A thing that I would like to see tried out thoroughly is the diathermic treatment of malignancies, that is, the treatment by electrical heat, generally spoken of as electrothermic coagulation. It has been shown perfectly by Percy in his treatment of carcinoma of the uterus by heat, that cancer cells are killed at a very low temperature; a temperature that will not affect normal tissue cells.

The New York Cancer Laboratory states that all cancer cells die when heated to 116.6 degrees F. for thirty minutes. Erlich determined by heat tests that cancer tissue maintained at a temperature of 111.2 degrees F. for thirty minutes was no longer viable when transplanted.

Dr. Geyser says that from "practical experience it has been shown that when the entire malignant growth is subjected to an increase of 3 degrees of temperature for sixty minutes daily, the physiology is markedly interfered with. Cachexia is prevented or removed; the tumor mass undergoes retrograde metamorphosis, individual nodules soften, become smaller, and finally disappear; pain ceases entirely; discharges lessen and lose their offensive odor."

The physiological treatment of cancer is still in an experimental stage, but it is an inviting field that is promising.

It seems to me that we could accomplish much in the treatment of these diseases by raising the temperature to 106, 110 or even 120 degrees. My intention is from now on in these cases when they are referred to me for roentgen treatment to see if it is not possible to also apply the heat treatment. Not in the form of hot applications to the outside which only macerate the skin and make more danger of a roentgen dermatitis; but by electrical heat where the greatest heat is in the tumor itself. It has been proven that the temperature of these parts can be raised to almost any desired degree and that the heat is higher in the tumor than it is at the pads. Consequently, we have a wide margin of safety so that we can apply heat to the tumor itself without burning the skin; and I certainly intend to try out this method thoroughly, and I would like to see the other roentgen men or men who do electrotherapeutic practice try it and see what can be done.

Many of these cases according to the statistics I have quoted are not cured by any method which we know at this time, and we are perfectly justified in trying something new. Malignant tumors is a large subject and could only be touched on here in so short a paper, but if what has been presented will have a tendency to stimulate the physicians to study and work along the line of the cure of malignancies, Dr. Knerr will be well repaid for the time spent in preparing his excellent paper.

DR. J. G. SHELDON, Kansas City: The case that Dr. Knerr reported was one that I referred to him. It had previously been sent to a roentgenologist for diagnosis and came back as osteomyelitis, and was operated and drained. During the time of this operation we had a good deal of bleeding. I did not feel that my operation had done any good whatever and then I referred the patient to Dr. Knerr for treatment. The question is, is there anything we can offer the patient that will do him any good? The roentgen-ray treatment of these sarcomas alone I am not familiar with, but I happened to read an article about the steam treatment of these cases. The case was operated, the bone denuded and soft parts and bone laid open, and then the steam treatment placed over this bone the soft parts being protected by asbestos.

Wikowski reports thirty-four recoveries in forty-six cases. I do not believe that the roentgen-ray treatment alone in sarcomas of the extremities, where they can be operated and where they can be amputated and the soft parts removed, is very beneficial. I believe the combined treatment with steam and electricity is the treatment of the future. Osteo-sarcoma is a condition that we are almost at sea about handling and we are very fortunate that we do not see it oftener than we do.

DR. JOHN C. MORFITT, St. Louis: I was not fortunate enough to be present during the reading of the entire account of this case so I may be mistaken, but my impression is that there is nothing in the remarks of the essayist that would indicate that a Wassermann blood test was made. There is always a doubt about a diagnosis of malignant bone tumor

unless the Wassermann is negative. I reported some years ago a case of sarcoma of the clavicle and I believed at that time it was sarcoma. The whole clavicle and the manubrium were removed, involving a lateral ligature of the innominate vein. The patient made an excellent recovery and today—I have seen her recently—one does not notice the absence of the clavicle; in fact, there is a new bony formation. In this case there was a subsequent formation, a metastasis in the right patella tendon. Both the original and secondary growths were diagnosed microscopically as sarcoma. Long after the patient had recovered Dr. Gradwohl told me that he had found a positive Wassermann in the spinal fluid of this case. That threw a doubt in my mind as to my diagnosis. I believe now it was a syphilitic tumor of the clavicle and also of the patella tendon. The roentgen ray was used for postoperative treatment over an extended period. About the same time Dr. Engman and I saw a similar case which Dr. Engman diagnosed as syphilitic tumor of the clavicle, although I thought it might be sarcoma. The patient refused radical surgical treatment and took the chances with mercury. I believe the treatment proved Dr. Engman's diagnosis correct.

In view of this experience and especially in view of the statement that a Wassermann was not made, I am strongly of the opinion that the case the essayist reports was not one of malignancy but in all probability is lues. The nodules in the lungs do not rule out tuberculosis or syphilis.

DR. E. B. KNERR, closing: No Wassermann was made, but the history was negative. The tumor is undoubtedly an osteo-sarcoma. The calcareous tuberculous nodes of the lungs occur in clusters, each node surrounded by a halo; these are clear and sharpe and up until the present month they remained the same definite size. So the diagnosis without question is that of malignant sarcoma of the tibia.

### URETERAL CALCULI\*

C. E. BURFORD, M.D.

ST. LOUIS

Ureteral calculi are composed of uric acid, urates, phosphates, calcium oxalate and cystine crystals, and of a mixture of two or more of these, usually forming in the kidney calices or pelvis and finding their way by flow of urine and by motion and position of the body and by the movement of the kidney, into the ureter, where they may pass directly to the bladder or become lodged at any point along the course of the ureter, but principally at three points, viz.: at the junction of the kidney pelvis and upper end of the ureter, at a point where the ureter passes over the pelvic brim, and in the lowest inch of the ureter where it penetrates the bladder wall. Leonard estimates that 50 per cent. of all urinary stones are discovered in the ureter.

The composition of these stones is of interest because of their formation being influenced by diet and reaction of the urine, and because it

is difficult or impossible to get roentgen-ray shadows of small pure stones while those of mixed composition are more opaque to the rays.

The form and character of the surface is of particular interest because the smooth stones pass through the ureter much more readily than the rough ones but at the same time obstruct the flow of urine through the ureter more completely and produce hydronephrotic destruction of the kidney if left in the obstructing position.

It was formerly maintained and supposedly proven by animal experimentation that acute obstruction of the ureter, such as that caused by smooth stones or that caused by ligation, was followed by hydronephrosis, but we now know that hydronephrosis is caused only by intermittent or partial obstruction below the kidney, whereas atrophy is the result of acute and complete obstruction without infection.

The time required for complete or irreparable atrophy is somewhat indefinite and probably differs in the individual. Cabot reports a case of complete blocking of the ureter for several weeks when ureteral calculus was removed and patulency of the ureter established, with better functional return of kidney than of its fellow.

The writer has observed several cases of ligated ureters with complete obstruction to secretion from corresponding kidney for periods of time from a few days to several weeks, with a return of function ranging from poor to almost normal.

Ureter colic caused by the gripping or spasmodic contraction of the circular and longitudinal muscle fibers of the ureter on the stone attempting to pass from the kidney pelvis may occur at any time but is prone to occur at night while the patient is in bed and may be explained by the position of the body. Since the kidney pelvis points toward the median line and somewhat anteriorly, all the calices and especially those of the lower pole will drain best with the patient recumbent and on the opposite side or partially on the face. When the stone is once in the ureter it may remain stationary, forming more or less of a pocket or dilatation at its site, or even becoming adherent to the mucous membrane, or it may in a retrograde manner fall back into the kidney pelvis; but the most probable and common course is for it to proceed by irregular stages down the ureter and by the "vis a tergo" of the pent up urine. Occasionally the location of the pain and tender points will trace the downward course of the calculus; but more often the symptoms do not definitely locate the offending foreign body. The symptoms more or less common to ureter colic due to stone are sudden sharp pains in the back or side just under the last rib radiating

\* Read at the Sixty-Second Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



downward and toward the median line anteriorly, usually referred sooner or later to the inside of the corresponding thigh, the bladder, urethra and corresponding labium in the female and the meatus urinarius and testis of the same side in the male. Sometimes all the pain is referred to the opposite side, hence the necessity for ureter catheterization and securing of roentgenograms of both sides. Microscopically the urine may or may not show pus and bacteria but almost invariably shows red blood corpuscles in carefully sedimented specimens.

Watson and Cunningham describe some unusual symptoms of ureter stone, such as a sharp pain in the knee and in the heel.

I wish to report the case of a traveling man, aged 53, who, without any other signs or symptoms, complained of a constant pain in the right epididymis. Very little induration was found and patient gave no history of venereal disease. The urinary findings were negative to albumin and pus, but did show a few red blood cells. This pain had existed for many months and the patient had been started, by some physician whom he had consulted on the road, in the use of morphin, which he was taking in increasing quantities. Cystoscopic examination was made and ureters catheterized, finding no obstruction. Seminal vesicles, prostate, and verumontanum were found normal. Finally in desperation the epididymis was dissected off leaving the testicle uninjured as it seemed to be the tender point, but no relief was had. It was then for the first time roentgen-ray pictures were taken showing a shadow the size of a grain of corn at juncture of right ureter and kidney pelvis. The stone was removed, after finding it not only adherent to the mucous wall of the ureter but covered completely by granulation tissue so that no metallic contact could be felt with an instrument. All pain disappeared from the epididymis with the removal of the stone and has not returned.

While the absence of red blood corpuscles from the urine is almost conclusive evidence against the diagnosis of ureter stone, their presence may be caused by many other conditions, such as kidney tuberculosis, tumor, stone or ulceration in any portion of the urinary tract, syphilis of the kidney, acute nephritis, and not infrequently appendicitis with inflammation extending about the ureter.

The most frequent differentiation the writer is called on to make is between ureter colic and "lumbago" or myalgia of the lumbar muscles. The history of the case usually makes the distinction, as lumbago is complained of most on the first movements of the body on awakening after the muscles have been for a long time in one position and the pain disappears or subsides on exercise or from any cause making a hyperemia of the part, while exercise or massage increases the pain caused from ureter stone.

The absolute diagnosis can be made only by passing the roentgen-ray catheter up the ureter against the stone and by taking the roentgenogram, or better the stereoroentgenogram, of the stone in contact with the catheter. This

method should be insisted on in all doubtful cases and always before operation. When the stone is located within the lowest inch of the ureter very positive evidence of its presence can often be seen through the cystoscope in the form of a slight tumefaction in the mucous membrane of the bladder wall in the line of the ureter and just beyond the ureteric orifice. There is frequently a marked edema of the labia of the orifice and on numerous occasions the writer has observed the stone actually in sight within the orifice.

Ureter stones may be successfully treated by at least three methods, but before taking up these methods it might not be amiss to say something about dissolving these stones.

If the question of dissolving stones were asked only by the patient it would scarcely be worth while to mention it in such a paper as this, but not infrequently do we find some enthusiastic therapist who believes or succeeds in making his patients believe that he has dissolved their stones and has in reality disillusioned their ideas of the necessity for further investigation or operation until their kidneys are beyond repair. As a matter of practical demonstration the writer has taken a ureter stone a little larger than a garden pea and immersed it for twenty-four hours in pure sulphuric acid to find that the acid acted only on the surface, liberating a jelly-like mass of mucine, which is one of the important substances cementing most stones together, and this film of mucine had protected the remainder of the stone from the action of the acid.

There is absolutely no question but that the greatest of all solvents, water, if taken in sufficient quantities, keeps substances in solution in the urine that would be thrown down in crystalline form in concentrated secretion, but we have not the slightest evidence that urinary stones once formed even in the smallest masses are ever caused to go into solution again while in the living body.

The first method of treatment and the one that is used too frequently in the treatment of ureteral stones is the expectant plan, or treatment of the principal symptom of pain by the use of opium and its derivatives. Roundtree and Geraghty have proven by animal experimentation that the use of morphin increases the number and strength of the peristaltic contractions of the ureter, hence the very large doses of morphin required to relieve the pain or ureter colic. The opinion is held that this method should be recommended only when the stone is known to be very small and reasonably smooth and has been in the ureter only for a short time and when the other two methods are for any reason impossible. It is true that a large per cent. of these stones will eventually

find their way to the bladder, but irreparable damage to the kidney will be found in most of these cases.

If in addition to partial or complete blocking of the ureter by the stone there is an infection in the kidney pelvis, this infection will be driven into the lymphatics between the collecting tubules and into the cortex of the kidney while under pressure and result in multiple abscess formation, as demonstrated by Stoerck, necessitating the immediate removal of the kidney. No case of ureter stone complicated by infection should be treated by the expectant plan.

The second method is by intraureteral manipulations and injections and is indicated in by far the largest per cent. of cases and should be tried in all cases except those of very large or irregular stones.

By the injection of local anesthetics and paralyzing agents into the ureter and up against and below the stone we have almost an ideal remedy which instantly relieves the pain and by paralyzing the circular fibers of the ureter below the stone increases its caliber and favors the rapid discharge of the stone. To Roundtree and Geraghty is due the credit for experimenting with and putting in the hands of the profession in convenient form for use, papaverine in sterile ampules for intraureteral injections. Within five minutes after its injection through a ureteral catheter the vesical ostium of the ureter is seen to stand open in more of a round shape than as a slit and apparently losing all its valve effect. Within a few hours after its use the ureter stone is frequently found in the bladder. The writer and his associate, Dr. Kramolowsky, have had a very successful experience with the use of this drug locally in several cases with apparent failure in some others.

No untoward effect either locally or systemically have been noted in the use of papaverine.

Stones within or very near the vesical ostium of the ureter may be grasped and removed by ureteral forceps through the cystoscope, but these forceps have not proven of value for stones at any distance from the bladder.

On two patients, one male and one female, I have been able by bimanual manipulation to bring down stones within the last 2 inches of the ureter.

Now and then a stone may be delivered into the bladder by slitting the vesical orifice of the ureter, care being taken not to penetrate the entire bladder wall.

The third method is that of open operation, exposing the ureter extraperitoneally through the prolongation of the usual kidney incision posteriorly so that the kidney can be palpated or inspected and the ureter more easily found

and traced. This incision may be extended forward 1 inch in front of the anterior superior spine of the ilium and as low as necessary for proper exposure of any portion of the ureter.

The ureter usually adheres to the peritoneum and should be stripped off with care. When the stone is located it is usually best to slit the ureter some distance above the stone and by the use of forceps grasp the stone and pull it up to the opening because there is apt to be a sacculation formed at the side of the stone and a tendency for the urine to leak at that point, especially if there is a stricture below it.

After the stone is removed it is well to dilate any constriction below the former site of the stone. The incision in the ureter, which is always longitudinal, should be closed with a few interrupted fine catgut sutures. A small drain may be left in the neighborhood of the ureteric wound for twenty-four hours but should not touch it.

The percentage of return of kidney stones which may later become ureteral stones in Cabot's series was fifteen.

No doubt much can be done in a hygienic way to teach these patients how to live and above all how to drink water. It is conceded by practically all authorities that proper exercise is most essential as a prophylactic.

The avoidance of stimulants and irritants is no doubt important and the proper reaction of the urine to prevent precipitation of the special crystals which tend to form in the individual case should be given close attention, but more important than all these measures is to render the kidney pelvis free from infection, which is possible in a large number of the cases.

Most authorities concede that infection plays a most important rôle in the formation of urinary stones and if this is true no physician should allow his patient to go with a pyuria or bacteriuria who has once had ureteral stones, without proper cystoscopic examination and lavage of the infected kidney pelvis until it is free from infection or has been proven impossible to sterilize.

650 Century Building.

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#### RECURRENT VOMITING IN YOUNG CHILDREN

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Periodic, fitful, recurrent or cyclic vomiting was first described as a definite clinical entity by an English specialist, Dr. Gee, who offered no treatment other than symptomatic. He also described the fruity odor to the breath in the disease.



Lees<sup>1</sup> reported a fatal case from the Great Ormond Street Children's Hospital, in a girl of 5 years who was admitted with history of recurrent vomiting. Her breath had an acetone odor and there were both acetone and diacetic acid in the urine; she became comatose and died "with gasping respiration like the air hunger of diabetes." Postmortem revealed some fatty change in the liver and kidneys but otherwise was negative. Langmead<sup>2</sup> records two other fatal cases in girls aged 4 and 5, respectively. In both cases some fatty change was seen in the liver. Sutherland,<sup>3</sup> in his "Treatment of Disease in Children," devotes one paragraph to the disease but offers no suggestion as to treatment. Still,<sup>4</sup> McCaw<sup>5</sup> and Graham<sup>6</sup> describe the disease in detail and caution against making the diagnosis without ruling out the more common causes of vomiting.

The diagnosis seems to depend on recurrent vomiting which cannot be ascribed to dietetic causes, during which the child's breath smells heavily of acetone; the urine is highly colored, of high specific gravity and positive for acetone and diacetic acid. Usually the child is unable to take even water without vomiting. The attacks seem to end spontaneously, frequently only after complete exhaustion and fear for the recovery of the child has been entertained.

In Still's cases eight were boys and eight girls. All the cases described were below the age of puberty and even without treatment all seem to end in spontaneous cure at about this time.

The soda bicarbonate treatment has come to be almost universal in caring for this condition, and lately a great deal of attention has been paid to the prevention of the attacks as a method of permanently curing the disease.

Bogensky<sup>7</sup> feels that the condition is due to a functional disturbance of gastric innervations and suggests change of environment and light diet, sea voyages, and high altitudes. Abdominal massage may be beneficial he suggests.

Rood Taylor<sup>8</sup> reports several cases of recurrent vomiting in children in which there was evidence of tonsillar or adenoid disease. All of these cases were improved after the removal of the tonsils and adenoids.

Four cases have come under my observation which have been benefitted so definitely by Still's<sup>9</sup> method of prevention that it seems worth while to describe the cases briefly and to report the method used.

All four cases were little girls between 3 and 5 years of age; all had been subject to these attacks for a year or more; all came on without premonitory symptoms or demonstrable cause, and all occurred once every three or four weeks. All four children had had their tonsils and adenoids removed; none showed evidence of diseased teeth and all showed pus cells, acetone and diacetic acid in the urine. In two of the children the vomiting was usually followed by loose stools for three or four days, but without other evidence of gastro-intestinal pathology. Treatment did not seem to affect any of the cases during an attack; alkalies by mouth even in minute doses were always vomited and the feeding of 5 per cent. glucose by rectum in alkaline solution did not seem to be beneficial.

After all cases had been seen in one or two attacks the following procedure was outlined: Sodium bicarbonate 0.6 with brandy 0.18 in a tablespoon of water were given three times a day as routine. When the child showed the slightest evidence of a possible impending attack, sodium bicarbonate 0.9 with brandy 0.3 was given every hour for seven doses and followed by a phenolphthalein cathartic. Since this treatment was started, more than three years ago, one child has been absolutely free from the attacks; one has had two attacks and two have had one. The parents have decreased the dosage for all of the children so that now two are receiving sodium bicarbonate 0.3 once daily and the other two only occasionally.

Certainly this method of treatment has proved efficacious in the four cases and the period which has elapsed seems to warrant calling the cases cured.

Frisco Building.

#### THE FREQUENCY AND CHARACTERISTICS OF FUNCTIONAL HEART MURMURS

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AND

JULIEN E. BENJAMIN, M.D.

CINCINNATI

The routine examination of recruits has given opportunity for the notation of many points not hitherto brought out. Necessarily so, when it is considered that many thousands of men, presumably at the maximum of health and strength, passed through the hands of the examiners. At this camp (Camp Funston), for instance, over 26,000 men have passed through the receiving station in one month. What a fine op-

1. Lees: Brit. M. J., 1904.

2. Langmead: Brit. M. J., Feb. 5, 1905; Sept. 28, 1907.

3. Oxford Med. Pub., 1912.

4. Still: Common Diseases of Children, Oxford Pub., 1912.

5. McCaw: Diseases of Children, William Wood and Co., 1914.

6. Graham: Diseases of Children, Lea and Febiger, 1916.

7. Bogensky: Arch. f. Kinderh., 34, 1915.

8. Taylor: Minnesota Med., February, 1919.

9. Personal communication.

portunity to study the normal variations of the individual and to corroborate old and established clinical facts. It is surprising to note with what intensity a cardiac murmur may resound and still have no organic significance. It is true that cardiac murmurs are the most certain physical signs by which valvular disease may be recognized and its location determined; but that murmurs are very frequent in the absence of valvular lesions, and that they occur in perfectly healthy hearts is here emphasized. Because of the fact that the heart murmur is a cardinal symptom of organic cardiac disease, it is important to consider carefully adventitious sounds at the various valve areas. No doubt many a man has been done an injustice by attaching too much importance to a murmur. Also probably many a good risk has been lost to military service, or rejected for life insurance for the same reason.

Observations were noted over a period of two months and a half, during which time 36,667 men passed through the receiving station. All men were examined by a member of the cardiovascular board in addition to the general examiners. Of this number 1,653 were referred to the "Heart Room" for closer study. The total cases having definite murmurs were 479. Reduplication or roughening of sounds was not included. The number of functional murmurs amounted to 326, or 68 per cent. of the whole, while the number associated with organic diseases was 146, or 32 per cent. In other words the functional murmurs doubled in frequency any other type. Figuring on the basis of the number of men examined, one man in 76 had some form of murmur; one man on the average out of every 112 had a functional murmur.

Some characteristics found useful in the diagnosis of these functional murmurs may be enumerated here.

*Location.*—They were most frequently heard about half an inch below the nipple, and next in frequency along the left border of the sternum about the third interspace. A number were heard at this place to the right of the sternum.

*Character.*—Not much reliance may be placed on the intensity of the murmur, for they may be loud, rough, blowing, or rasping in sound. The influence of excitement, fatigue, and strange environment is very likely a factor in the character as well as the production of the sound. Those most frequently heard resemble the blow of mitral insufficiency; those occurring in the pulmonic area are more likely to be rough.

*Time.*—All of the murmurs noted in this series were systolic, with two exceptions, which were diastolic and were heard at Erb's point.

The facts which served to distinguish these two from true aortic insufficiency were the disappearance of the murmur after exercise and the absence of the other phenomena which accompany aortic disease. Functional murmurs rarely occupy more than a portion of systole and do not entirely replace it, and are seldom heard at the end of systole.

*Transmission.*—Transmission is very limited in most cases. There seems to be no rule for their transmission, some following in the direction of the blood stream and the others counter to it. None were heard in the vessels of the neck, and they were seldom heard in the so-called "irritable heart" of soldiers. The long, thin-chested type of individual seems more subject to these functional lesions than others.

Thus far, the differential diagnosis of the murmur *per se*, has only been considered. Of course with reference as to whether or not a subject can do efficient military service or his ordinary occupational duties, is of least importance, for the factor which determines his fitness is his response to increased effort. It matters little really what murmurs are present. If the individual responds well to work, he is a good military risk from a cardiac standpoint. It is further to be noted in these cases that there is rarely a history of infections, or changes in the outline of the heart. It has been possible to place a reliable check on our work by means of a system of histories which have been kept in each case. These cases seldom are referred for subsequent examination because of cardiac indisposition. They apparently stand full duty very well.

#### CONCLUSIONS

Observations of the draft increments bear out statements of other observers as to the frequency of the functional murmur.

Most functional murmurs may be clearly classified from the true murmur of organic disease by a close study of their characteristics.

Men possessing functional murmurs without other cardiovascular manifestations are not subject to cardiac breakdown.

#### RESUME OF FIGURES

Total men examined.....	36,667
Referred for closer study.....	1,653
Murmurs found .....	479
Organic murmurs .....	153 (32%)
Functional murmurs .....	326 (68%)
Location of murmurs, at or near apex.....	81%
At border of sternum.....	10%
At both areas.....	2%
Locations not stated .....	7%
Time of murmurs, systolic.....	324 (99%)
Diastolic .....	2 (1%)
Thirty-First and Troost Streets.	



# A CASE OF LETHARGIC ENCEPHALITIS IN LATER MONTHS OF PREGNANCY\*

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Mary R., Croatian, aged 26, mother of two children, both living and in good health. Family history: Parents both living and in good health. She is the oldest of three children and has been in this country about fifteen years. She has had the usual diseases of childhood, was married at the age of nineteen. The two previous pregnancies were normal throughout. She has had no miscarriages, no serious illness and escaped the influenza during the epidemic. During the early months of this pregnancy she felt well; very little nausea and vomiting. The urine was examined every month and was practically normal at each examination.

The evening of March 1, her husband found her lying on the floor apparently asleep. He lifted her on to the bed and did not think anything was wrong with her. She was up the next morning but complained of being very weak and dizzy. Later in the day she laid down on the bed and would not answer questions nor take any notice of her family or surroundings. The next day, Monday, she was taken to the home of her parents about a block distant. She walked this distance. The following day was the first time I saw her. She lay on her back, eyes half closed and face expressionless. She would open her eyes and answer questions intelligently but in a slow, weak, monotonous voice. Her face was flushed, pulse 110 to 114, respiration normal, temperature, 99.4; tongue coated, pupils somewhat contracted. She did not complain of any pain, with the exception of some headache. There was no disturbance of vision. She would not change her position for long periods of time. Her arm would remain in whatever position it was placed (catalepsy).

The case seemed to be one of hysteria at first examination, but on questioning her mother, there was found no family trouble or quarrels to act as exciting cause. They had recently had to move from the house in which they had lived for several years. She showed unusual excitement and nervousness over having to move, so much in fact a day or so previous to actual illness that her friends noticed this change in her, so that the onset of the disease may be said to date from this excitement. In other words, it was the onset of the disease that probably caused the excitement and worry. This was the only cause to which I could attribute an outbreak of hysteria. I assured her and the family that it was hysteria and proceeded to suggest to her that her actions were due to her own volition and exacted a promise from her to try and get back to her normal self. She apparently listened and knew what I said. She answered in a weak voice and without facial expression that she would try. In a few moments her eyes were half closed and she was in the same semicomatose state. The next day her condition was unchanged; face flushed, rapid pulse, semicomatose, pupils contracted, temperature 99.6, tongue coated and saliva thick and ropy. She could be aroused by speaking to her at any time, but answered questions slowly and indistinctly. The only complaint she made in answer to question, was that she felt "so weak." The theory of hysteria was now overruled and an attempt was made to discover the cause or nature of her illness.

The white blood count was 14,000. Bimanual examination showed normal position and a living fetus. The knee jerks were normal; there was some rigidity of muscles of the extremities, and Kernig's sign was not well marked. She complained of some pain on full extension of the leg, and rigidity was distinctly more than normal. A spinal puncture was made without local anesthetic and elicited no complaint. The spinal fluid flowed freely but without undue pressure. It was clear and the cell count was 11. The Noguchi test was negative and Haines solution was reduced. Stained specimen failed to show any bacteria. The uranalysis was 1,020, acid, no albumin, no sugar, but lactose, albumose were present; no indican, no diacetic acid, no acetone, no casts, few scattered pus and epithelial cells. The Widal test was negative. There was no paralysis of eye muscles or face. No discharge from ears. Throat was normal.

*Course of Disease.*—The patient continued in the state of lethargy, which deepened slowly but progressively from day to day. The first few days she would awake voluntarily to void urine or defecation. She did not ask for food. She could be easily aroused to take nourishment up to the end of ten days. After the tenth day she did not arouse voluntarily nor change her position. Her temperature for the first week was from normal the first two days, then 99.6 to 100.6, and varied between these figures several times in twenty-four hours, sometimes higher in the morning, sometimes higher in the afternoon. It rose gradually to 102.6 at the high point, fluctuated in this manner during the balance of the time, until forty-eight hours before death the temperature rose to 103.4. The pulse was very rapid from the start, very seldom under 120. It gradually increased to 140 but even at this was of good volume and did not get thready until after reaching 150. The respirations maintained the normal ratio to the pulse. There was no cough and no vomiting at any time but there was some distention of the abdomen at times which could be relieved with oil or enemas. The baby continued alive as shown by fetal movements and heart sounds but the movements became feeble on March 19 or 20 and could not be felt March 21 when labor started.

The beginning of labor was noticed by vigorous contractions of the uterus about 9 a. m., and was terminated by the birth of a stillborn girl baby at 1 p. m. The mother did not arouse during the course of the labor except once to mutter a complaint of pain in her back. The uterus contracted well after delivery and the placenta was normal in appearance and expelled within twenty minutes after the baby.

Treatment was without results and consisted of careful nursing, repeated cleansing of mouth, digitalis and hexamethylene. Several intravenous injections of sugar and soda, sugar and salt, and sugar alone in solutions were given with the idea of diluting the toxins in the blood stream. Nothing seemed to stay the progress of the disease. The lethargy deepened, the pulse, temperature and respiration continued to rise and death came as it does in any overwhelming infection, on the twenty-fifth day of illness.

*Diagnosis.*—The conditions with which this could be confounded are: (1) Hysteria; (2) toxemia of pregnancy; (3) meningitis; (4) typhoid fever; (5) influenza; (6) brain abscess.

1. Hysteria: On first examination, hysteria would seem to be the probable cause of the trouble, the listless, expressionless attitude, never speaking except when urged and then in a low monotone, the condition of catalepsy, all

\* Read before the Linn County Medical Society, May 13, 1919.

present the picture of hysteria that is occasionally manifest in certain pregnant women who have been provoked by some action of their husband or family and take this means of showing their resentment. The rapid pulse, rise of temperature and the length of time easily ruled out hysteria.

2. Toxemia of pregnancy: This would of course have to be considered and could very easily be definitely determined. There was no vomiting and frequent uranalysis during the previous months had been negative. Uranalysis during the illness did not show any derangement of the kidney function. No albumin, no diacetic acid, no acetone, no sugar, no casts or pus or blood. These findings would necessarily rule out a toxemia of pregnancy.

3. Meningitis: There were several points of resemblance to meningitis: the rigidity of muscles, the fluctuating temperature, the mental symptoms, contracted pupils, Kernig's sign, rigidity enough to call positive. The onset would fall within the possible onset of meningitis. The absence of almost constant symptoms would raise a doubt of that diagnosis: there was no headache, photophobia or vomiting, no marked rigidity of neck or retraction without one of which and in the absence of laboratory findings, a diagnosis of meningitis should not be made. The spinal fluid flowed without excess pressure, was clear, the cell count was normal, and repeated punctures failed to find any diplococci, intracellular meningitis or any other form of bacteria. It reduced Haines solution and the Noguchi reaction was negative. There were no convulsions or delirium; in fact, her mind remained clear whenever aroused. There were no petechial spots. The white blood count was not high enough at first (14,000) to be meningitis, and fell lower at other counts, except temporarily after intravenous infusion. The abdomen was quite tympanitic above the uterus.

4. Typhoid fever: The fact that in several newspaper reports of "sleeping sickness" the statement has been made that the patient went to sleep a few days after an attack of typhoid shows that probably the first diagnosis of typhoid was made. The two conditions are not dissimilar on first appearance. The early development of the so-called typhoid state, the gradual rising of temperature, the low blood count, the distended abdomen, coated tongue, resemble typhoid. The dissimilar points are the absence of epistaxis and cough, no digestive disturbance, deepening lethargy, contracted pupils with little response to light, catalepsy. The laboratory findings against typhoid are the leukocyte count, higher than typhoid, and negative Widal.

The points that stand out permanently and should make a diagnosis easy are:

1. Patient in a state of lethargy that gradually deepens.
2. Rapid pulse from beginning.
3. Gradually rising temperature that fluctuates largely through the first weeks.
4. Contracted pupils that react slightly to light, losing this reaction entirely later in the course of the disease.
5. Flushed face, with sweating of face.
6. Thick, ropy saliva, with tendency to dribble from mouth.
7. Condition of catalepsy.
8. Some rigidity of muscles, enough to make Kernig's sign quite positive.
9. Laboratory findings: (a) Slight leukocytosis; (b) normal urine; (c) normal spinal fluid; (d) negative Widal.

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#### THE EFFECT OF CASTRATION OF THE FEMALE \*

WILLIAM KERWIN, M.D.  
ST. LOUIS

In studying the effect of castration on the human female it is of practical interest to consider only the female between puberty and the climacteric. It rarely if ever falls to our lot to castrate a female before puberty, and all of our observations of human beings castrated before puberty are gained chiefly from a study of the eunuchs of the Turkish harem and from the Skopts in Russia, who are desexed for religious reasons. In these subjects castration allows an increased growth of the anterior lobe of the hypophysis, which causes a marked increase in the length of bone and a deposit of fat. The sexual organs fail to develop normally. In no way does the eunuch resemble a female, as a quiet and phlegmatic disposition is the rule, a characteristic that could hardly be generally ascribed to woman. Whether or not the female would show the same changes is an open question.

While castration of the unmatured human female is almost unheard of, such cannot be said of the adult. On the advent of abdominal surgery the ovary was respected with undue holiness, but when operations became safe in the hands of many there was for a time a wholesale slaughter of the organ most precious to woman until it became necessary to look with contempt on those scoring high records in ovariectomies, and in this way a more or less stable line was established. The writers who

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\* Read before the St. Louis Medical Society, Jan. 18, 1919.



were responsible for the conservative teaching fathered the thought that only bad could result from removal. So completely did they inject fear into the average conscientious surgeon that many women had their abdomens closed with a diseased ovary left behind. This necessitated further operative procedure until finally the patient became a hopeless neurasthenic, not because of the loss of her ovaries but because of the numerous operations done. In studying 2,716 consecutive operations for all causes done on males and females at the St. Louis City Hospital by the visiting surgeons, it was found that 443 were done by the gynecologist, and that he was compelled to castrate 258 of these women on one or both sides; meaning that the general surgeon castrates one out of every ten cases while the gynecologist castrates six out of every ten cases he operates. The frequency with which the operation is done at the present time warrants a consideration of the end results.

From a physiological and chemical standpoint the influence of castration after puberty has been extensively studied but what changes have been noted are in part at least caused by other ductless glands. In general it may be stated that the pre-existing idea of a profound mental and physical change in the organism does not take place, or is the exception rather than the rule. I will try to clear up this point later by citations. One of the popular misconceptions regarding the results of oophorectomy is that certain features of the male type may be acquired, such as change in voice growth of hair on the face, coarseness of the skin, and a general assumption of the masculine type. Such ideas have been acquired by reasoning from a reversed analogy to eunuchs. There is never seen the slightest evidence of a transformation to the opposite sex type even after early castration. This is also confirmed by animal experimentation. The idea that fat always accumulates after removing the ovaries of a woman is also an exaggerated one. There appears to exist, however, a relationship between adiposity and the genital system. We know for instance that a large number of fat women are sterile. This does not permit us to assume that abnormal accumulation of fat follows removal of the ovaries of a matured woman, for such occurs only rarely, in fact no more frequently than follows certain other operations. The sexual impulse seems little disturbed by oophorectomy. If the libido has been normally awakened the sexual impulse is retained for a number of years and in some cases greatly intensified. This signifies that the sexual impulse is not dependant on the ovary, an observation which bears out the Freudian theory. The most definite results from castration of a matured woman are manifested by atrophy of the gen-

ital system and by certain temporary vasomotor disturbances which I believe are due to a rise in blood pressure. During the menopause the vasomotor disturbances, when they are present, can be alleviated by lowering the blood pressure with ovarian extract. This upholds the belief that the vasomotor disturbances occurring in castrated females is due to a rise in the blood pressure brought about by the absence of the vasodilating effect of the ovarian secretion. No observations have been made to confirm this idea. It may be stated that these disturbances are less frequent than formerly supposed. I have observed that the younger castrated females suffer less often from the symptoms of artificial menopause than do those nearing the climacteric. This is perfectly plausible when you consider the vasomotor changes that normally begin after the fourth decade of life. This view is held by Oldhausen, Peterson, Mandl and Buerger, all of whom have gathered a large number of cases for their conclusions.

In studying the late results I was able to trace fifteen cases on whom a total removal of both ovaries was done because of a diseased condition. The cases were seen from one to seven years after operation and ranged in age from 23 to 45 years at the time of castration. The study showed:

1. All were well and found able to carry on their usual vocation in life.
2. Two had gained perceptibly in weight (one 27 pounds). All the rest remained stationary.
3. Two were more nervous since their operations (ages 39 and 45).
4. Three complained of hot flushes beginning two, five and six months following their operations (ages 31, 39 and 45 years).
5. There was no disturbance in the sexual impulse in any case except in one and here it was distinctly increased.
6. Six patients between the ages of 23 and 29 had no symptoms of any kind.
7. All disturbances came in women between 31 and 45 years of age.

With the exception of three cases these women were compelled to give up their ovaries because of an inflammatory condition. Whether or not these diseased organs gradually lost their function and permitted the related endocrine glands to take up the work of the ovary about to be sacrificed and thereby had the organism readjusted for the storm, is open for consideration. No statistics on this point are of sufficient dimensions to warrant a conclusion.

In closing allow me to present these few points for your criticism:

1. The younger adult females suffer less from castration than those nearing the menopause.

2. The sexual life of woman is not dependant on the ovary.

3. The conversion to the male type is not seen after castration.

4. Obesity following is the exception rather than the rule.

5. The frequency with which ovariectomy is done even at the present time has not materially increased the number of neurasthenics.

215-216 Lister Building.

#### REMOVAL OF FOREIGN BODIES FROM THE CORNEA AND TREATMENT TO PREVENT ULCERATION\*

J. ELLIS JENNINGS, M.D.  
ST. LOUIS

The subject of this paper was suggested by an article in the May 3, 1919, number of *The Journal of the American Medical Association*, which states that the Supreme Court of North Dakota affirmed a judgment in favor of a railroad engineer for \$7,933.50 against a physician for negligence in the treatment of an injured eye, wherein it appeared that the patient should have been sent to an eye specialist at least twenty-four hours before he was. The history of the case is as follows:

The engineer got a cinder in his eye December 19. That night, after completing his run, he endeavored to remove the cinder with the charred end of a match stick. Failing in this, the next morning he went to the office of the physician, where the cinder was removed; his eye was not bandaged, but a boric acid lotion was ordered. On the day following the physician ordered a solution of argyrol and applied a bandage. On the morning of December 22, noticing the wound was infected, the physician told the patient to go to the company's eye surgeon, who found an infected ulcer with pus in the anterior chamber. The scar resulting from the operation, which was rendered necessary by the infection, was located directly over the pupil, and resulted in total blindness in the affected eye.

Without entering into a discussion of the justice of this decision, it is apparent that every railroad surgeon is liable, at any time, to be confronted with a like situation. Therefore, I am sure you will be interested in knowing how to treat an injury to the cornea.

The secretions of the conjunctival sac always

contain micro-organisms the most common of which are the pneumococcus, the streptococcus and staphylococcus. The outer, or epithelial, layer of the cornea prevents the entrance of these germs; but if this delicate membrane is ruptured they enter the wound and if not destroyed promptly will cause ulceration. The most destructive type of ulceration is the sloughing or creeping ulcer caused by the pneumococcus.

*Removal of Foreign Bodies from the Cornea—Instruments Required.*—1. A large magnifying glass to focus the light on the cornea. 2. A compound lens, or corneal loupe with a flat focus of three-fourths inch, to search for the foreign body. 3. A sterile metal spud, or sharp pointed instrument to remove the foreign body.

I have a spud which I prize very highly, made from an old dissection needle with the point rounded off. The first thing to do, of course, is to locate the foreign body. This may be difficult, if its color offers no contrast to that of the iris or pupil; or when the particle is so minute that it is not visible to the unaided eye. But



Fig. 1.—Magnifying glass.

if light (bright daylight or artificial light) is focused on the cornea by means of a large convex glass, and a careful inspection made through the corneal loupe, it is always possible to find it. Assistance is often given by having the patient turn his eye in various directions. Another aid is the instillation of a drop of a 1 per cent. solution of fluorescein, which stains the site of the foreign body a bright green. Having located the foreign body, the eye is anesthetized with a few drops of a 4 per cent. solution of cocain. Before using the metal spud, always take a probe with a wisp of cotton wound tightly around its end and try to dislodge the offending substance. Many foreign bodies, loosely attached, can be removed in this way with minimum damage to the epithelium. If the foreign body is firmly embedded in the cornea, the metal spud is used to pry it out. Have the patient hold his eye steady, and if he complains of pain instil another drop of cocain. Don't scrape off all the epithelium in the neighborhood of the foreign body as that only increases the chances of subsequent infection.

\* Read before the St. Louis and San Francisco Railroad Hospital Association, May 12, 1919.



Try to insert the point of the spud under the foreign body and lift it out. Frequently a particle of iron is hot when it strikes the eye (iron scale) and becoming oxidized, appears of a dark brown or black color. The surrounding tissue is also oxidized so that the scale is surrounded by a brown ring. When the scale is removed this brown ring must also be scraped off before healing will take place. I wish to

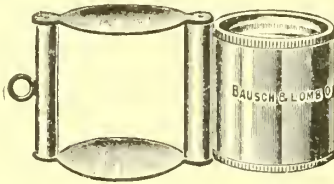


Fig. 2.—Corneal loupe.

emphasize this point strongly: never stop until every particle of iron scale and the surrounding brown ring is removed.

Not infrequently we are called to remove a foreign body when none can be found. The patient is suffering great pain, there is photophobia, lachrymation and ciliary injection and he insists that there is something in the eye. Probably the cause of the trouble is an abrasion of the cornea. This is best detected by the green stain left after a drop of fluorescein is instilled. In these cases a bandage will give instant relief. Having removed every particle of the foreign body and any ring of brown stain, the next thing to do is to disinfect the wound. For this purpose a drop of protargol (10 per cent. solution) or argyrol (25 per cent. solution) is instilled. It is better to use protargol as it has a stronger bactericidal action.

The next, last and most important thing to do is to apply a protective bandage for at least twenty-four hours, to allow the wound to heal. One of the cardinal rules in surgery is to put the inflamed or injured part at rest. How can the wounded cornea rest with the upper eyelid



Fig. 3.—Metal spud.

rubbing over it every few seconds in the act of winking? The fine nerve endings are exposed over the raw surface so that the rubbing of the lid, the glare of the light and the impurities of the atmosphere, all tend to aggravate the condition, increase the pain and prevent healing. For relief of pain some physicians order the frequent instillation of cocain drops. This is very bad practice and of course makes matters worse because cocain destroys corneal epithelium. I remember a case in which the entire cornea was denuded of its epithelium from this

cause; the patient was in great pain, and as the pain increased he used the cocain drops more and more frequently. All that was necessary to give relief was to stop the cocain and apply a protective bandage.

In conclusion, the points to remember are:

1. Remove every particle of the foreign body, including the surrounding brown stain.
2. In getting out the foreign body, do not scrape off any more epithelium than is absolutely necessary.
3. Disinfect the wound with a few drops of a 10 per cent. solution of protargol, or a 25 per cent. solution of argyrol.
4. Apply a protective bandage for twenty-four or forty-eight hours, or until the wound has healed. A little pad of gauze held in place with two strips of adhesive plaster, will be all that is necessary.
5. Never give the patient cocain in eye drops for the relief of pain. It always makes it worse.
6. Again, and for the last time, let me urge you never to forget the bandage. It may save a law-suit and heavy damages. If the man protests against the bandage, explain the dangers and put it on. Tell him if he takes it off after he leaves the office, why then it is up to him.

Carleton Building, 308 North Sixth Street.

#### AMERICAN HOSPITAL IN HAVANA

One of the most needed institutions today in Havana is an up-to-date American hospital for the benefit of the large Anglo-Saxon colony in this island. In every part of the world where there is a foreign colony, one of the first necessities it feels is the possession of its own institutions, such as churches, schools and hospitals, of which the last mentioned are, perhaps, the most indispensable. New York, for example, has its Jewish, French and German hospitals, and soon will have a Spanish hospital. In Cuba the Spaniards have built their several *quintas* (country houses with gardens or parks) and no doubt feel more at home in them than in the strictly Cuban hospitals, notwithstanding the fact that they are of the same race and language, and it would seem as if the Anglo-Saxon residents of Cuba must feel the same need even more sharply. It is becoming more and more the custom among the Anglo-Saxon women to be confined in institutions instead of in their homes. This is even more necessary in Cuba, owing to the difficulty of procuring trained American nurses for the homes on such occasions.

The large number of banks, railroads, sugar estates, and various other foreign corporations employing Americans, Canadians and Britishers, would not only find such an institution of great comfort and help, but it would also constitute an insurance for their employees.

The plans for this American hospital are made and the approximate cost will be \$300,000, which includes the site and the building, \$150,000 of which is already available. The American colony of Cuba has received with joy the idea of having its own hospital, and we doubt not that it will soon be a reality.—*Jour. A. M. A.*, July 19, 1919.

# THE JOURNAL

OF THE

## Missouri State Medical Association

AUGUST, 1919

### EDITORIALS

#### MISSOURI AND THE MENTAL HYGIENE MOVEMENT

During the past few years the JOURNAL has on several occasions commented on the question of state care of the insane and feeble-minded in Missouri. Attempts to better the condition of this large group of dependents have been made but the necessary legislation has not been accomplished, the political factor dominant in the control of our eleemosynary institutions preventing any step in advance. Every now and then we are again brought face to face with this deplorable state of affairs by some such action as took place recently in the management of State Hospital No. 3 at Nevada. There is only one way that this situation can be improved: by adequate legislation that will effectively remove the state institutions from political control and the spoils system. Before such legislation can be intelligibly proposed and enacted it is essential that an accurate knowledge of the needs of the state be obtained. Such knowledge necessitates a complete survey of conditions surrounding the insane and feeble-minded in Missouri, not those in the institutions alone but those in the state at large as well. Such a survey was first advocated by the Missouri Society for Mental Hygiene and has since received the support and approval of the Missouri State Medical Association.

Organized work in mental hygiene was inaugurated for the purpose of accomplishing in the field of nervous and mental disorders results akin to those which have been so successfully achieved in other fields relative to public health and welfare. The importance of the movement at once becomes apparent when one considers the great groups of people who will be benefited in one way or another by organized work in mental hygiene. The two chief groups are: the insane, of whom almost 200,000 are already in institutions and tens of thousands still outside of them; and the mentally deficient or as they are more commonly called, the feeble-minded, of whom only a few thousands are as yet cared for in institutions while unaccounted thousands of them are still at large—often a menace to the communities in which they live. Next in importance numerically are the thousands of people addicted to the excessive use of

alcohol and demoralizing drugs, and the epileptic, the exact number of whom cannot in the absence of reliable statistics be stated. To these groups may be added that large and undeterminable group of people who through mental causes are unable to so adjust themselves to their environment as to live happy and efficient lives. Regardless of how we measure the problem of mental health, or mental ill health as it might for the present purposes more appropriately be termed, it is without question one of the vitally important problems of the day. The world war has taken every available energy so that our endeavors at home have been curtailed. At the same time it has decidedly emphasized the need of better laws giving more consideration to mental and nervous disorders as essential medical problems based on the broad humanitarian principle that prevention is better than cure and that cure is better than chronic invalidism.

As an economic measure, prevention in mental disorders is a policy that Missouri should adopt. It is due the state as a saving in dollars and cents and it is due the patients in the benefits to be derived in the prevention of a mental disorder, in making possible early first aid care of all persons needing the benefits of hospital facilities.

With the advent of the period of reconstruction and the projection of programs for rehabilitation of social welfare work it is fitting that individuals, communities and the greater interests in general humanitarian sentiment as represented in our great commonwealth, proceed to make a survey of their social needs. Such a survey would aid in developing the potential resources of the state by outlining a comprehensive program, constructive, practical, worthwhile and destined to give Missouri its deserving place in the front rank in social welfare activities.

It is a matter of great good fortune to this commonwealth that the mental hygiene movement has become national in scope. The National Committee for Mental Hygiene together with its many affiliated state societies for mental hygiene has been the means of great accomplishments. The National Committee out of its own resources will make such a survey of Missouri as comprehensive as could possibly be desired and as a result of which we may confidently expect the long sought for improvement in the management of our eleemosynary institutions and the state care of the insane and feeble-minded. Governor Gardner has extended an invitation to the National Committee for Mental Hygiene to conduct the survey of Missouri and before long we will see the actual beginning of the correction of a long existing state of evil.



It must not be forgotten by our profession that this whole matter in the last analysis is medical in character and therefore every physician in Missouri should be ready to do his bit for this movement not only because he is a physician but because he is a citizen of Missouri.

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### POSTGRADUATE MEETINGS

Plans for the postgraduate meetings as announced in our July issue are progressing. The medical departments of Washington, St. Louis, and Missouri Universities have promised their cooperation and several societies have indicated their desire for a meeting early in the fall.

The council is anxious to make these meetings instructive but in order to do so the councilors and the members in each councilor district must enter into the spirit of the arrangement with enthusiasm and plan their meetings far enough in advance so that the executive committee may arrange for speakers without conflicting with other meetings.

We hope the councilors will communicate with the secretary of the Association during August and indicate what kind of lectures they desire to have presented in their districts. By this arrangement the council hopes to bring to the busy practitioners through the state a knowledge of the newer methods of diagnosis, including all the aids in that direction which are being developed by scientific medicine.

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### UNSHACKLED

One of the big results of the war is the freedom that comes to the medical profession, to chemistry and to certain industries, from monopolistic control of essential products such as drugs, dyes, etc. In 1917 the House of Delegates of the American Medical Association adopted a resolution appealing to the Congress to abrogate all German patents and trade marks controlling salvarsan and other important drugs. Congress did so. There are thousands of patents thus abrogated, over 4,500 of them applying to chemistry alone. All these patents and those pertaining to the dye industry have been sold to the Chemical Foundation, a corporation organized at the suggestion of the Alien Property Custodian by members of the American Dyes Institute, the American Manufacturing Chemists Association, and others engaged in various branches of the chemical industries. One of the important objects of the Foundation is the advancement of medical science. Other objects are, fairness to the \$450,000,000 invested in the chemical business by loyal Americans in the hour of our need; independence and freedom of the textile, leather, paper, paint and varnish,

pharmaceutical, \$3,000,000,000 essential American business; the necessity of our national defense; the destruction and prevention of the German system of propaganda and espionage in our land; the advancement of pure science and research.

The charter of the Foundation prohibits earnings of more than 6 per cent. for the stockholders. All net earnings above 6 per cent. shall be "used and devoted to the development and advancement of chemistry and allied sciences in the useful arts and manufactures in the United States." We learn from the report of the Alien Property Custodian and the prospectus of the Chemical Foundation that if the patents turn out to be as valuable as is hoped, this provision should render a considerable income available for research purposes, and for this work the Foundation is in a position of unique advantage. It forms a link of a type heretofore unknown between industrial and academic research. It is in a position to bring about in this country cooperation between the laboratories of the university and those of the dye works, as close as that which has accomplished so much in Germany. Informal offers have already been received from important laboratories, placing their facilities at the disposal of the Foundation, and resolutions looking to the same end are already pending before the governing bodies of various large companies and institutions.

As a preliminary step in this direction the Foundation intends to take a laboratory census of the country, a thing which it is believed has never been attempted, and hopes thus to create a bureau of information where any scientist at the start of an important research may be able to ascertain where the facilities which he needs are obtainable and what institution has already made progress along similar lines. This bureau should also be able to aid in bringing together those who wish to undertake and those who are interested in such researches. These activities will furnish valuable aid in what is perhaps the most important work now before the country—the advancement of chemical science in the industries, and particularly in medicine.

The offices of the Foundation are in the Market and Fulton Bank Building, 81 Fulton Street, New York City.

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### TEACHING CENTER AT ST. LOUIS FOR PUBLIC HEALTH NURSES

The St. Louis Chapter of the American Red Cross has completed arrangements for conducting a teaching center for public health nurses in St. Louis. An area in the congested district in the southern portion of the city has been mapped out and a large building on South Broadway, formerly occupied by a saloon, has

been rented for the clinic center. Miss Welsh, formerly instructor in public health nursing at the Henry Street Center in New York, has been engaged and placed in charge of the practical work.

Beginning in October, courses of four months will be offered and limited to graduates of regular hospitals. The course will include theoretical instruction at the Missouri School of Social Economy and practical instruction at the new teaching center.

It is the purpose of this teaching center to supply nurses trained in public health work for community service in the southwestern states. At the present time a large number of positions for nurses are open and it is the intention to train the nurses in St. Louis rather than send them to the public health training courses in Cleveland and New York.

Information regarding the courses can be obtained through the Southwestern Division of the American Red Cross, or at the St. Louis Chapter, Frisco Building, St. Louis.

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#### SURG.-GEN. WILLIAM C. BRAISTED, PRESIDENT-ELECT OF THE AMERICAN MEDICAL ASSOCIATION

The election of Dr. William C. Braisted, Surgeon-General of the Medical Department of the Navy, as President of the American Medical Association was particularly appropriate to the Victory Meeting. Thus the Association not only honors the man it elects but is itself honored. Dr. Braisted's career represents a steady progress through many delicate tasks and difficult assignments. He was born in Toledo, Ohio, in 1864, and was graduated by the University of Michigan in 1883, and by the medical department of Columbia University in 1886. He served as intern in Bellevue Hospital, New York, for two and one-half years, entering civilian practice in Detroit in 1888 and continuing until 1890, when he entered the Navy as assistant surgeon. He was promoted in 1893 to passed assistant surgeon, then to surgeon, and in 1913 to medical inspector. In the routine of a naval career he has served on a number of vessels and at many naval hospitals, and twice has been instructor in surgery in the naval medical school. In 1904 he fitted out and equipped the hospital ship *Relief*. During the Russo-Japanese War he went to Japan as the representative of the Medical Department of the United States Navy, and his report on this assignment was considered by the Japanese officials to be the most accurate and complete published. Surgeon-General Rixey appointed him assistant chief of the Bureau of Medicine and Surgery; he continued in this service for six years, from 1906 to 1912, serving also under Surgeon-General Stokes. During 1906 and 1907

he was attending physician at the White House. He acted as fleet surgeon of the Atlantic Fleet from 1912 to 1914, when he became Surgeon-General of the Navy with the rank of rear admiral. He has been decorated twice by foreign governments—first by the emperor of Japan and later by the president of Venezuela. Admiral Braisted is especially noted for the interest he has taken in preventive medicine. He has given particular attention to the control of venereal diseases. Under his administration the Department of Medicine of the Navy has made a most enviable record, as indicated by the remarkably low mortality and morbidity records of the men in the naval service. The election of Admiral Braisted at this time is especially fitting: it recognizes the service without whose aid the winning of the war would not have been possible.—*Jour. A. M. A.*

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#### THE MEDICAL SOCIETY OF VIRGINIA CONTROLS MEDICAL JOURNAL

We welcome to the family of state medical association journals the *Virginia Medical Monthly*, the latest addition to the list of journals published under the supervision and direction of the organized medical profession. The *Virginia Medical Monthly* was established by Dr. Landon B. Edwards in 1874 and has been published by his son, Dr. Charles M. Edwards, since the death of the founder. In common with all medical journals previous to the establishment of the Council on Chemistry and Pharmacy, the *Virginia Medical Monthly* was patronized by the makers of nostrums, practically all of which had been exposed by the Council on Chemistry and Pharmacy and refused space in the advertising pages of journals owned by state associations. But with the control of the journal passing to the Virginia State Medical Society the advertising pages have been scoured and all objectionable advertisements have been dropped. With the assistance of the Cooperative Medical Advertising Bureau many of the vacancies in the advertising pages have been filled with council approved articles, so that the new journal appears with an ethical advertising department.

We extend our cordial greetings to the *Virginia Medical Monthly* as a state association publication and our best wishes that it may prove an influential factor in strengthening the organized medical profession in Virginia. There are now twenty-eight medical journals owned or controlled by state medical associations, representing thirty-eight states, all except one of them (Illinois) adhering strictly to the rules of the Council on Pharmacy and Chemistry in their advertising policies.



## TYPHUS MENACING WORLD

War on typhus with a view to preventing the spread of the dread malady from Poland, where 100,000 persons are down with the disease, to other countries of eastern and southeastern Europe is planned by the League of Red Cross Societies of the World, the first great health work on behalf of humanity which the organization recently formed has set out to perform, and news of the antityphus plan, which is the result of a series of conferences between the Supreme Economic Council and Lieut.-Gen. Sir David Henderson, director general of the League of Red Cross Societies, was conveyed to American Red Cross headquarters.

Reports from Poland show that thousands have died from lack of medical care and that conditions in Hungary and other parts of eastern Europe due to the appearance of typhus are such as to constitute a menace to the rest of the world. Surveys made on behalf of the Supreme Economic Council show that the disease is spreading rapidly and that it will take a vigorous campaign to check it before cold weather sets in. Added to the menace of typhus is the danger of a cholera epidemic in these countries, the peoples of which are still suffering from the shock of war and undernourishment.

The Supreme Economic Council has appointed a committee of British, French and Italian representatives to confer with representatives of the League of Red Cross Societies, the object of this conference being the preparation of plans that will be submitted to the governments of the countries of eastern Europe. The necessity for immediate action will be presented to these governments. For its own part the League of Red Cross Societies has addressed an appeal to its founder members, the Red Cross organizations of the United States, Great Britain, France, Italy and Japan, and to the Red Cross organizations of twenty-four other countries which have been invited to join the League, to hold themselves in readiness to participate in the campaign against typhus.

The division of duties between the League and the Supreme Economic Council has been arranged, it being agreed that the latter organization will place at the disposal of the League all the surplus medical and hospital supplies belonging to British and American armies and insure their transportation, while the League will supply and maintain the personnel for the administration of the relief measures. The League of Red Cross Societies will also provide the best medical service and advice obtainable. In this connection the League will be in a position to use, immediately after the antityphus plan receives governmental approval, the methods for combating typhus disclosed during the recent important conference at Cannes, where

the world's leading physicians and public health experts were assembled.

In connection with the proposed campaign against typhus Lieutenant-General Henderson, director general of the League said:

"If the Red Cross League is charged with the serious responsibility of protecting public health in this crisis, the people of the various nations must realize that the fight is their own and that the League is acting as their instrument.

"The League will be put to the severest test at the very beginning of its existence. We believe that with the aid of governments and with the aid of the voluntary national societies supported by the people, we can control and limit the spread of this epidemic so that Europe will be saved from disaster that would surely follow the spread of the disease. The situation in eastern and southern Europe is too serious to be coped with by any single government or by any voluntary society. The Red Cross League affords a medium through which governments and voluntary societies can cooperate and by means of which efforts may be coordinated.

"The League has at its disposal the assistance of the most expert medical advisers, trained by practical experience in combating typhus. It has already the help of the trained personnel of the American and the British Red Cross, both of which societies already have units in the field, and it can call for aid on other Red Cross societies that are members of the League. It will be able to utilize under expert direction certain medical and other supplies now in Europe owned by the Allied governments and national voluntary societies. With these means at its disposal the League is prepared to undertake the strategical direction of the campaign.

"This emergency has come on the League at the outset while it is still in process of organization, but the League has not felt that it should avoid responsibility. If the League is requested to undertake this work by the respective governments it will offer an opportunity to the people to show through their National Red Cross Societies their practical interest in common welfare. The future will depend on the response made to that appeal. The League has no thought of overriding national societies; on the contrary, it seeks to cooperate with them and to develop and stimulate them.

"The actual menace of typhus and cholera gives immediate opportunity to people to unite in the performance of this urgent service for the world."

A recent report from the American Red Cross says six American women fought typhus to a standstill in the remote little town of Palanka, Serbia. Here, one of the foulest pest-holes in Northern Serbia, was cleaned up liter-

ally and figuratively by American women. One of the nurses fell ill of typhus in her brave fight against the disease.

The American women, nurses of the Red Cross, found the center of the typhus plague in an army barracks. Here 267 Serbs and Bulgarians lay sprawled about on the floor, without bedding or medicines, with typhus lice crawling about them.

The barracks, by courtesy called a "hospital," had no modern surgical instruments, no baths, no toilets with running water, no pails, no utensils, no nurses, no medicine. The stench from the room in which nearly 300 emaciated, hollow-cheeked men lay on their filthy straw, was overpowering. Here human scarecrows with their skins like yellowed parchment drawn across their bones had lain down in their rags to die.

With the exception of the cook, who gave them greasy cabbage and meat stew three times a day, no one came to attend them until the arrival of the American nurses. Those who slept when the soup was ladled out got nothing. Each day several typhus victims were taken out on two planks nailed together and buried in a trench near the barracks.

The American women installed "delousing" baths, used up hundreds of gallons of lysol on the men, clipped and shaved the inert victims, then after bathing them in hot water, put them into freshly set up beds with white linen sheets, gave them food fit for convalescents, distributed American pajamas, scrubbed, whitewashed and disinfected the hospital from cellar to garret, drained nearby cesspools, screened doors and windows—and then they went out with gangs of Serbian soldiers to clean up the town!

### THIRTY-SIX PER CENT. DIVIDEND LOOKED SUSPICIOUS

"Truth in Advertising" is the motto of the Associated Advertising Clubs of the World and *Associated Advertising* is their official publication. In the July issue of that well-edited magazine we find editorial comment on an oil advertisement which physicians can ponder with considerable benefit to their pocketbooks. The vigilance committee mentioned in the article corresponds in a manner to our censors for it is the duty of that committee to investigate the truthfulness of advertisements and the probity of advertisers. The comment on the oil stock follows:

#### "PHONY" POKER GAMES TO OIL STOCKS

A publisher recently asked the National Vigilance Committee for information relative to an oil company whose advertisements indicated 36 per cent. dividends.

Investigation showed that the chief backer of the company had just gone through bankruptcy, with obligations of \$8,000, though it appeared that his divi-

dends, at 3 per cent. a month, would soon care for his \$8,000 of debts. He was the chief promoter of the "good thing." The committee also informed the publisher that this man had previously made many trips across the Atlantic on great ocean liners, earning his expenses and a good deal more by steering rich but unwise men into "phony" poker games en route.

Some other publishers, a little less particular as to what happens to readers who answer advertisements that appear in their papers, accepted the advertisements.

## OBITUARY

### WILLIAM S. ROBINSON, M.D.

Dr. William S. Robinson of Holland, Mo., a graduate of Barnes Medical College, St. Louis, 1895, died in Nashville, Tenn., June 16, from pellagra, aged 56. Dr. Robinson was a member of the Pemiscot County Medical Society.

### JOSEPH W. MCKEE, M.D.

Dr. Joseph W. McKee, a graduate of Northwestern University Medical School, Chicago, 1884, died at his home in Kansas City, April 27, aged 65. Dr. McKee was a member of the Jackson County Medical Society since 1900, a member of the Missouri State Medical Association and a Fellow of the American Medical Association, and specialized in diseases of the ear, nose and throat.

### WILLIAM L. CAMPBELL, M.D.

Dr. William L. Campbell, a graduate of the Kansas City Medical College, 1897, died at the Willcrest Hospital in Kansas City, April 24, after an illness of several months, aged 64. Dr. Campbell was born in Kansas City and witnessed the growth of that metropolis from the time when it was a frontier village. He had practiced in Kansas City for more than thirty years and was engaged in writing a history of the growth of the city when death interrupted the work. He was always identified with the organized medical profession, was a member of the Jackson County and Missouri State Medical Associations, a Fellow of the American Medical Association, and a member of the Missouri Valley Historical Society and the State Historical Society.

### SAMUEL M. EVANS, M.D.

Dr. Samuel M. Evans of Bloomfield, Mo., recognized by the medical profession as one of the ablest physicians of the state, died May 13, 1919, at the Touro Infirmary, New Orleans, following an operation for obstruction of the gall duct, from which he had been suffering for several weeks. The operation was performed by Dr. Carroll W. Allen and Dr. Eustes, Friday, May 9.



Dr. Evans was born Dec. 1, 1874, at Bardstown, Ky. He was a graduate of the Bardstown High School and Richmond College, Richmond, Ky. In 1898 he graduated with honors from the Kentucky School of Medicine, being awarded a gold medal for superior work done in clinical ophthalmology under Dr. M. F. Coomes. Eager to advance and become more proficient in his profession, he did postgraduate work in the Kentucky School of Medicine in 1909. During 1910 and 1911 he did polyclinic work in New York City and in 1914 took a postgraduate course and did clinic work in the Tulane University, New Orleans. Returning again in 1916, he took a course in operative surgery.

Dr. Evans located in Bloomfield in 1899, just one year after his graduation from the Kentucky School of Medicine. It was there he did his life work. In 1902 he was united in marriage to Miss Edna Barret, daughter of Mr. and Mrs. J. A. Barret of Bloomfield, members of the old and distinguished Barret family of St. Louis. Mrs. Evans was at his bedside during his last illness.

One of the bitter disappointments of his life was, after America's entering the world war, ill health prevented him serving his country at the front. He, however, engaged in many civilian war activities and served on the local war board.

The respect and admiration he commanded by his character, personality, genial disposition and ability, was strongly attested by the hundreds of friends and neighbors from far and near who paid their respect by their presence and floral offerings at the graveside of their departed friend.

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## NEWS NOTES

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THE thirty-second annual meeting of the Missouri Valley Medical Society will be held in Des Moines, Iowa, Sept. 18-19, 1919.

DR. BULLOCK, health director of Kansas City, says all of the meat markets in that populous center are in splendid sanitary condition.

DR. M. F. ENGMAN of St. Louis was elected president of the American Dermatological Association at the Atlantic City session, June 16 to 18.

DR. J. F. BINNIE of Kansas City was elected vice president of the American Surgical Association at the annual meeting held in Atlantic City, June 16 to 18.

THE Wyandotte County Medical Society in Kansas, just across the Missouri line, has inaugurated a crusade against unlicensed practitioners of medicine, quacks, and fakers.

THE nurses in the training school at the State Hospital No. 4, Farmington, had their first annual outing July 4. Music and speeches, a motor trip to Iron Mountain Lake, and a fish fry there, were features of this picnic.

A DONATION of \$2,500 annually for a period of three years has been given to Dr. M. F. Engman of St. Louis to be used in research work on a dermatological subject. The donor of the fund desires to remain anonymous.

DR. FREDERICK A. BALDWIN, who has been in charge of the Department of Preventive Medicine of the State University during the absence of Dr. Ravenel in Army service, has accepted the position of pathologist to Wesley Hospital, Kansas City.

A GRANT of \$8,200 per year for two years has been appropriated to Dr. M. F. Engman of St. Louis by the United States Interdepartmental Social Hygiene Board for research work in syphilis problems. The investigations will be conducted at the Washington University.

ON account of the number of infants and young children with chest diseases being brought to the regular tuberculosis clinic of the St. Louis Tuberculosis Society, the society has set aside the hours of 10 to 12 on Tuesday and Friday for the treatment of children.

IF you have a family cow you must consume all the lacteal fluid derived from her in your own home. You cannot supply less fortunate neighbors with any portion of the milk for if you do you then have a "dairy herd" and Bossie must be tested and inspected by the milk inspector.

FROM *The Journal of the American Medical Association* we learn that the Military Cross has been awarded to the following members of our Association: Dr. Edgar Ferdinand Schmitz, St. Louis; Dr. Burton Maltby, Liberty; Dr. Robert Vinyard, St. Louis; and that Dr. Charles Earl Fallet of De Soto, Mo., is to be an Honorary Companion of the Distinguished Service Order.

THE Colorado Congress of Ophthalmology and Oto-Laryngology will hold a session at Denver, August 4 and 5. The Congress will

be held under the auspices of the Colorado Ophthalmological and the Colorado Oto-Laryngological Societies, contrary to the practice in former years when it has been solely an ophthalmological meeting both as to program and supervision.

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WHEN taking the temperature of sick strangers, especially charity cases, physicians should glue their money (when they have any) to their pockets or otherwise anchor it to withstand a "touch." Recently one of the physicians at the City Hospital in St. Louis took the temperature of a negro patient, but the negro was in a taking mood himself and took the physician's \$17.

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THE first century of the United States Pharmacopoeial Convention will be celebrated in 1920, and already plans are being drawn to make this occasion a memorable one in the history of the pharmaceutical and medical professions. Dr. Harvey W. Wiley of Washington, D. C., is president of the convention and Dr. H. M. Whelpley of St. Louis is secretary of the board of trustees.

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A MOVEMENT has been started in St. Louis by orthodox Jews to establish a kosher hospital. It is said the Jewish Hospital, which is operated by reformed Jews has been offered to the promoters of the kosher hospital and that plans for the erection of a new Jewish hospital to cost about \$1,000,000 are under discussion. The Kosher Hospital Society expects to raise a fund of \$150,000 for hospital purposes.

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DR. FRED T. MURPHY was tendered a dinner by the faculty of the Washington University Medical School on Dr. Murphy's retirement from the faculty. Dr. Murphy has been professor of surgery in the Medical School of Washington University since 1911. He was commander of Base Hospital No. 21 and was later transferred to a commanding position in the American Red Cross. Dr. Murphy has made no announcement of his future connections.

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THE War Department has issued a warning to the public against solicitors of so-called historical books and publications of no historical value and published solely for commercial purposes. The department has been informed that in many parts of the country agents were calling on parents of soldiers, offering for varying sums, to publish photographs and service records of the soldiers in a book covering a single county or city. Most of these books have been found to possess no value.

ARMOUR AND COMPANY'S huge plant in the Chicago Stockyards is again open to visitors after being closed for two years due to government restrictions prohibiting visitors from the stockyards. Preparations are being made to open their other plants in various parts of the country so that a trip through a packing plant, which is an educational one, will not be limited to Chicagoans or visitors to Chicago. Uniformed guides are in attendance to explain the various interesting things to be seen.

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WASHINGTON UNIVERSITY SCHOOL OF MEDICINE has received a grant of \$5,000 to be used for the investigation of hypertrichiasis, from a person whose name is for the present withheld. A committee in charge of the grant has been appointed, consisting of the dean, Dr. G. Canby Robinson, Dr. M. F. Engman, of the Department of Dermatology to whom the grant was proposed, and Dr. Charles H. Danforth, of the Department of Anatomy, who will carry on the investigation which will be chiefly in the fields of anthropology and heredity.

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DURING June the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Robert McNeil: Chlorcosane (McNeil); Dichloramine-T (McNeil).

Lederle Antitoxin Laboratories: Pituitary Extract-Lederle; Ampules Pituitary Extract-Lederle, 0.5 Cc., 1 Cc.; Tuberculin "O. T." (Old Tuberculin); Tuberculin "B. E." (Bacillary Emulsion); Tuberculin "B. F." (Bouillon Filtrate); Antidysenteric Serum (Polyvalent); Streptococcus Vaccine (Polyvalent).

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ON May 11, 1918, *The Journal of the American Medical Association* published a letter from Dr. George Homan of St. Louis suggesting the use of petroleum or a combination of castor oil and tallow to eradicate the lice pest in the army. The suggestion was observed by Capt. N. P. Larson, Medical Corps, One Hundred and Sixth Infantry, A. E. F., who experimented on small squads of men. In a letter to Dr. Homan, dated February 17, Captain Larson said he found that grease was very efficacious in preventing the growth of lice on the bodies of soldiers who had anointed themselves with it.

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MEDICAL veterans of the World War living in southwest Missouri have formed an organization for the purpose of perpetuating the friendships formed and to keep alive the memories of their experiences. The first meeting was held at Springfield June 4 and temporary officers elected as follows: President, Dr. W. A.



Delzell, Springfield; Secretary, Dr. H. A. Lowe, Springfield; Committee on Organization, Drs. J. E. Dewey, J. L. Atherton, O. C. Horst of Springfield. Invitations have been sent to all physicians in the southwestern part of the state who served in the Army, Navy or Public Health Service to attend the meeting at Springfield, July 9.

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DR. J. T. HORNBACK of Nevada, the efficient secretary of Vernon County Medical Society and newly elected president of the Society of Medical Secretaries, makes it easy for the members at the meetings to express their thoughts on the proceedings. At the Tri-County meeting recently he passed around among the audience a slip of paper about 5 x 7 inches in dimensions with the words: "What idea or thought has impressed you most favorably at this meeting?" printed at the top of the paper and at the bottom these words: "Please sign and return to the secretary." Dr. Hornback believes "there will be some good stuff offered when the boys get the idea."

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DR. H. S. CLEMMER of Spokane is the proud possessor of red hair and the accompanying adornment of freckles, so he organized a Clemmer Red Head Club about six years ago. Members must have red hair and at least one freckle. At present there are 215 members, all boys. The doctor says there has never been a conviction of a red-headed boy in the juvenile court of Spokane in the last seven years. The "Big Brother" idea prevails in this club, and recently Dr. Clemmer brought to his aid the advice and assistance of business and professional men with the proper hirsute and dermatological adornment to help direct the activities and mold the characters of the boys in the club.

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WE learn from *The Journal of the American Medical Association* that funds have been donated to the St. Louis University School of Medicine by the United States Interdepartmental Social Hygiene Board to be used in the study of infection by gonococci, under the direction of Dr. Ralph A. Kinsella, director of the department of experimental medicine, and to the Washington University Medical School for biological laboratory investigation of the latent syphilitic as a carrier, under the direction of Dr. Martin F. Engman, professor of dermatology. The purpose of these investigations is to formulate if possible more effective medical measures in the prevention and treatment of venereal diseases.

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NEWS dispatches from Washington state that Major Ernest W. Slusher of Kansas City, a member of the Jackson County Medical Society, has been awarded the Distinguished Service

Cross. The citation reads: "Major Ernest W. Slusher, Kansas City, Mo., regimental surgeon, Medical Detachment, One Hundred and Fortieth Infantry, for extraordinary heroism in action near Charpentry, France, Sept. 29-30, 1918. Although severely gassed, he continued on duty until he collapsed twice and was carried each time to a dressing station. Advised to go to the field hospital for treatment, he waited until he had partially recovered, and then returned to duty in the field, working continually among the wounded and exposing himself to hostile fire."

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A SQUADRON of airplanes left Carlstrom Field, Arcadia, Fla., early in June with the intention of flying to Atlantic City, where the medical members of the squadron expected to attend the meeting of the American Medical Association. Among the physicians in the fleet was Capt. John H. Timberman of Marston, Mo., for a long time secretary of New Madrid County Medical Society and Councilor of the Twenty-Third District. The attempt to reach Atlantic City in time for the meeting did not succeed, so the squadron stopped at Washington where they received orders to go to Mineola, and Major Strong and Captain Timberman were instructed to deliver a series of lectures at the medical research laboratory. The party returned leisurely and had reached Fayetteville, N. C., July 10, having covered 2,160 miles in 29 hours 20 minutes flying time.

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THE first number of the bulletin of the St. Louis School of Occupational Therapy is being distributed among those who are likely to spread the knowledge that instruction in occupational therapy is being systematically conducted in St. Louis. The course will prepare students to teach occupational therapy to physically and mentally handicapped, and convalescents in public and private institutions, and to meet the demand of the government for reconstruction aides in military hospitals so long as that need exists. The next class opens September 16, and includes sixteen weeks of craft work and twelve weeks of hospital practice. The co-operation of the Barnes Hospital, the City Hospital, and the City Sanitarium offers ample opportunity for practical instruction. This is a splendid opportunity for young men and women with a high school education and the instinct of helpfulness to enter a field that will prove congenial and profitable.

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NEW YORK CITY health department recently classified the drug addicts who reported to the narcotic relief station where 1,403 were listed. Heroin seems to be the favorite stimulant, there

being 968 users of that drug (69 per cent.). Only 4 acknowledged addiction to cocaine alone, while 178 said their troubled spirits were soothed with morphin. Interesting to the physician is the statement that only 21 per cent. (292) assigned relief of pain, illness and insomnia as the cause of their addiction. The remaining 79 per cent. began using the drug, so reads the report, "more on account of an idle habit of drifting around and a general tendency to try anything suggested by evil companions than for any special reason." The report further informs us: "The figures are derived from tabulation of the clinic history cards of the drug addicts and their accuracy depends, of course, on the truthfulness of the answers made by the individual patients."

THROUGH the generosity of several public spirited citizens St. Louis will establish eight clinics about September 1 to promote the welfare of infants and children of pre-school age. The plan contemplates prenatal work, instruction in the care of the new-born, and watchful supervision until school age. The funds for the first year's work were contributed by private donations but will be administered under the supervision of the director of public welfare until April, 1920, when the city will take charge of the work and continue it as a municipal undertaking. The donors are Benjamin Gretz, Mrs. Lily Busch, Benjamin and Marcus Harris, Mrs. J. Louis Swarts, William T. Hill, Mr. and Mrs. George Warren Brown, Mrs. Ames Cushman, Mrs. Lon O. Hocker, Mrs. A. Brueggemann and an anonymous donor. The funds will be administered under the direction of Dr. Borden S. Veeder, of the Children's Hospital; Mr. John Schmoll, Director Public Health; Dr. C. H. Shutt, Hospital Commissioner, and Miss Lyda M. Anderson, Chief of the Municipal Nurses' Corps.

MOSQUITOES representative of all species occurring at camps or posts where troops of the United States are stationed are to be collected for the Army Medical Museum in Washington. At present the collection is incomplete and medical officers have been directed to see that collections of these insects are made at the times and in the manner described in circular instructions being published. Collections of mosquitoes are to be made at each station at least biweekly, at three periods during the twenty-four hours, early morning from 5 to 6 a. m., midday, and after 7 p. m. The time of collection will vary in different latitudes, but observation will determine the time when the insects are most prevalent at each locality. They are to be collected by means of a suitable killer or by mosquito traps. The "chloroform tube" is the best and most easily obtained killer,

and mosquito traps are also useful. Shipments of the mosquitoes in lots of twenty-five each in specially prepared boxes are to be mailed by medical officers at camps to the curator, Army Medical Museum, Washington, D. C.—*Science*.

An association composed of prominent physicians of New York City has been incorporated for the purpose of correlating all the clinical facilities of New York City and attempting to make the metropolis the real medical center of the country for teaching postgraduate work and studying medical problems. In the constitution of the association four objects are named, as follows: 1. To improve and amplify the methods of graduate and undergraduate teaching. 2. To perfect plans for utilizing the vast clinical material of the city for teaching purposes and to make use of teaching talent now unemployed. 3. To bring about a working affiliation of the medical schools, hospitals and laboratories, as well as the public health facilities of the city, to the end that the best interests of medical education may be conserved. 4. To initiate the establishment of a medical foundation in New York City whereby funds may be secured to meet the financial requirements of all forms of medical education and investigation. Dr. Wendell C. Phillips, ear specialist and general surgeon for Bellevue Hospital, is the president, and Dr. Haven Emerson, formerly health commissioner of New York, is the secretary. Other officers of the Association are: Dr. George D. Stewart, president of the New York Academy of Medicine, first vice president; Dr. Glentworth Butler, chief medical consultant of the Long Island College Hospital, second vice president; Dr. Arthur F. Chace, stomach specialist of the Post-Graduate Hospital, treasurer. The trustees are: Col. Charles H. Peck, Dr. William Francis Campbell, Dr. John E. Hartwell, Dr. Frederick Tilney, Dr. Otto V. Huffman, Dr. Adrian Lambert, Dr. Samuel A. Brown, Dr. James Alexander Miller and Dr. George W. Kosmak.

ON July 9 an organization composed of ex-medical officers, U. S. Army, residing in Southwest Missouri was perfected at Springfield. The meeting was held at the Chamber of Commerce and called to order by temporary chairman, Dr. W. A. Delzell, at 2 p. m. The address of welcome was delivered by Hon. Perry T. Allen of Springfield. There were about forty men present and the following counties are included: Vernon, Barton, Jasper, Newton, McDonald, Barry, Lawrence, Stone, Dade, Cedar, St. Clair, Hickory, Polk, Christian, Taney, Webster, Dallas, Camden, Laclede, Wright, Howell, Oregon, Texas, Pulaski, and Greene. It is estimated that there will be between 150 and 175 men eligible for membership from these counties. A skeleton constitution was submitted



and after prolonged discussion adopted. The temporary committee on organization, composed of Drs. James E. Dewey, LeRoy Ather-ton and O. C. Horst, was made a permanent committee for the purpose of completing a constitution and submitting it at the next annual meeting. The purposes of the society in the main are: 1. Social. To perpetuate and promote that feeling of comradeship that already exists between men who were in service. 2. Scientific. The scientific side of the organization is to be limited to one oration at each meeting. 3. To discuss, as conditions may demand, the relation of the physicians to the various military establishments of the United States. It was voted that the first meeting be held at Joplin on November 11, the anniversary of the signing of the armistice. Everything points to a large attendance and the Joplin men have pledged themselves to go the limit and are arranging an excellent program. As this is to be more of a social than a scientific organization, the committee on arrangements asked that the wives of the members be given a prominent place in the organization and that they be invited to each meeting. The following officers were elected for the ensuing year: President, Dr. W. A. Delzell, Springfield; vice president, Dr. L. M. Edens, Cabool; secretary, Dr. H. A. Lowe, Springfield; treasurer, Dr. J. H. Fulbright, Springfield; corresponding secretary for Jasper County, Dr. R. M. James, Joplin. The various committees are to be appointed by the president and announced later. A name for the organization will be decided on at the next meeting and a prize of \$5 is offered to the member submitting the name that is adopted. Those who attended were very enthusiastic over the future of the organization.

Kansas City; Gorham, F. D., St. Louis; Green, J. R., Independence; Greenberg, C., St. Joseph; Grove, G. W., Sedalia.

Hallberg, J. W., Kansas City; Hamilton, C. O., St. Louis; Havard, H. D., Sedalia.

Jackson, W. R., Kansas City; Jaracz, W. J., St. Louis; Johnson, E. H., St. Louis; Jolley, J. F., Mexico.

Kelly, I. D., Jr., St. Louis; Kempff, L. A., St. Louis; Kennedy, A. F., St. Louis; Kieffer, R. S., St. Louis; Kimball, A. C., St. Louis; Kimberlin, J. W., Kansas City; Knabb, A. D., Springfield; Kouri, M. F., St. Louis.

Langsdorf, H. S., St. Louis; Leavy, C. A., St. Louis; Liberman, D. L., St. Joseph (Navy); Lienhardt, H. O., North Kansas City; Long, F. L., Farmington; Lucas, H. R., Joplin (Navy); Lusk, C. A., Butler.

Maltby, B., Liberty; Martyn, J. H., Cuba; McGinnis, C. S., Sedalia; McKee, J. W., Kansas City; McPherson, O. P., Kansas City; McRaven, C. P., Jamestown; Mellies, W. J., St. Louis; Morris, R. H., Kansas City; Murray, S. A., Holden; Murphy, A. J., St. Louis.

Newell, Q. U., St. Louis; Nickell, L. O., Macon; Nigh, J. W., Pattonsburg.

Ogilvie, F. L., Blodgett.

Pare, E. Y., Leeton; Peck, J. H., Breckenridge; Phipps, G. W., Caruthersville; Porter, A. L., Kansas City (Navy); Pryor, H. B., Ashland.

Raab, F. H., Kansas City; Rehfeldt, C. S., St. Louis; Roberts, J. L., Kansas City; Robb, E. F., Hopkins (Navy); Rogers, C. H., St. Louis; Rothman, H. L., Washington.

Sanford, J. R., Kansas City; Schmid, O. A., St. Joseph; Slusher, E. W., Kansas City; Smith, E. S., Macon; Spence, E. L., Fulton; Stewart, J. W., St. Louis; Swahlen, P. H., St. Louis.

Tarleton, F. S., St. Louis; Thompson, A. M., St. Louis; Thomson, D. A., St. Louis; Timerman, A. R., St. Joseph; Tierney, J. L., St. Louis; Townsend, V. F., Maplewood; Twyman, George T., Independence; Tyree, James I., Joplin.

Urquart, W. H., Holliday.

Vaughan, J. R., St. Louis; Vaughan, F., Shelby.

White, E. C., Kansas City; Will, L. A., St. Louis (Navy); Williams, R. S., St. Louis; Wilhelm, D. E., Kansas City; Wilson, C. E., Kansas City; Wilson, J. M., Stoutsville.

Young, J. C., Ozark.

## MISCELLANY

### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY AND NAVY

Allison, N., St. Louis; Armstrong, C. L., Webster Groves; Armstrong, John H., Kirkwood; Ashley, H. V., Bloomfield.

Barnwell, R., St. Louis (Navy); Belsey, W. A., St. Louis; Billick, E. J., Kansas City; Birsner, L. J., Ste. Genevieve; Blount, H. J., Potosi; Boyd, J. W., Sarcoxie; Bradford, O. F., Columbia; Brennan, J. T., Vichy; Brookes, T. P., St. Louis; Broderick, D. E., Kansas City (Navy); Brogles, G. H., Bethany.

Callaway, F. C., Ravanna; Cantrell, C. D., Kansas City; Clancy, J. F., St. Louis; Clark, M. H., Kansas City; Coffin, E. L., St. Louis; Crabtree, R. E., Butler; Cutler, R. R., Berger.

Drake, G. S., St. Louis; Dudley, C. R., St. Louis; Dugay, H. W., Kansas City.

Edmonds, D. D., Kansas City; Edwards, F. T., Keota; Elkins, H. A., Hardin.

Feige, C. A., Kansas City; Flader, O. F., St. Louis; Foster, F. F., Kansas City; Frank, A. M., St. Louis. Gentry, William H., Carthage; Gifford, A. W., Springfield; Gilbert, A. A., St. Louis; Gist, W. L.,

### THE AMERICAN LEGION

The birth of the American Legion in St. Louis in May was one of the most momentous developments of the war. Never in the history of this country was there such a gathering of young men. The enthusiasm of youth was quite evident but no group of sages could have been more cool-headed, keener in judgment, or more intense in purpose than these ex-soldiers and sailors of the United States.

It was evident throughout that the two greatest attributes which the men brought home from the war were a *spirit of unselfishness* and a *desire for service to mankind*. Every resolution which could be interpreted by the country as indicating a selfish motive on the part of the soldiers, for example, the six months' additional pay for discharged soldiers, was immediately voted down, practically unanimously. At no time would any hint of using this organization as a political power be tolerated. The leaders in the movement were the strongest in denouncing any political preferment for any man as one of the motives of the Legion.

Bolshevism, the I. W. W. movement, and all other radical movements tinged with non-Americanism, were most severely arraigned. It was ever apparent that here was a group of men, representing millions of

other men, who would fight and die to perpetuate a 100 per cent. Americanism. It was even more apparent that this organization stood squarely behind fair play for every one and would not tolerate the misuses of either economic or political power by any class or party.

But the most vivid impression gained at the convention was the spirit of idealism which marked almost every action. This spirit can best be interpreted by the one word—Service—service to their country, service to one another, and especially to those soldiers handicapped because of lack of funds, unemployment or by disability from disease or wounds, and service to humanity.

A new force is abroad in the country—a force that will “safeguard and transmit to posterity the principles of justice, freedom, and democracy.”—*Carry On.*

### PUBLIC HEALTH LEGISLATION

A movement to create a Department of Public Health in the federal government has been launched in Congress in the form of a bill introduced by Congressman John McDuffie of Alabama, which authorizes the President to appoint a secretary of public health at a salary of \$12,000, who is to be the head of the department. The organization of bureaus is left to Congress, but the President is authorized to transfer to the new department all government bureaus now devoted to public health work. The records and office equipment of the existing health bureaus are also to be transferred. The secretary of public health shall have personal jurisdiction and supervision of all public health matters of the federal government, except those of the medical departments of the Army and Navy. The measure provides for the organization of the following bureaus: Sanitary research, vital statistics and publications, foods and drugs, quarantine, sanitary engineering, government hospitals and personnel and accounts. Additional bureaus may be established by the secretary with the approval of the President. The cooperation of state health organizations is authorized and the organization of a health board of the state health representatives is arranged for, to serve in an advisory and cooperative capacity, but without legal powers. The sum of \$10,000,000 is appropriated to be used as follows: For the establishment of a homogeneous system of health administration in the respective states, \$1,000,000; for rural sanitation, \$2,000,000; for the control of communicable diseases, including tuberculosis, venereal diseases, hookworm, etc., \$5,000,000; for scientific study of the causes and manner of transmission of disease, \$2,000,000. It is provided that “it shall be the specific duty of the Department of Public Health to foster and promote all matters pertaining to the conservation and improvement of the public health and to collect and disseminate information relating thereto.” It is known that there is considerable sentiment in Congress for a strong public health department, although Congress is not generally in favor of additional governmental expenditures. The President would have the authority to make the secretary of public health a member of his cabinet if he chose. —*Jour. A. M. A.*

### PRESENT STATUS OF MEDICAL PRACTICE AS AFFECTED BY THE HARRISON DRUG LAW

There has been some confusion in the minds of physicians as to their rights and duties with regard to narcotic drugs, due to recent changes in the Harrison Law and its construction by the courts. There is not sufficient space to give here the text of the

amendments to the law passed at the last session of Congress, and these amendments are not of much importance in their effect on medical practice.

The change in the legal status of medical practice which it is most important that physicians should clearly understand is that caused by the Supreme Court decisions construing Section 2 of the law. Briefly stated, the rule of law now is that there are two, and only two classes of cases in which narcotic drugs may be administered, prescribed or dispensed to addicts (there has been no change affecting the legal right to use these drugs in the cases of persons who are not addicts).

The first class of cases comprises those in which the addiction is merely incidental to some underlying pathological condition requiring the use of narcotics either to relieve suffering or to control symptoms which might aggravate the condition. Every physician must feel free to treat such cases in accordance with his own professional conscience and judgment, and no reputable physician should hesitate to do so. In this, as in all cases with which a physician has to deal, it is his duty to seek the underlying cause of the patient's condition, and direct his treatment to the elimination of that, wherever practicable, rather than to the alleviation of symptoms; many cases of drug addiction owe their origin to professional carelessness in this respect. But where it is not possible to remove the cause, and where its continuance renders necessary or desirable, in the practitioner's honest judgment, the use of morphin or other narcotic, he need not fear getting into legal difficulties by continuing its use, even though the patient be an addict. In fact it is highly desirable that patients of this class be freely treated by reputable physicians, rather than be compelled to rely on questionable sources for the relief to which they are rightfully entitled. No practitioner has any excuse, so far as the law is concerned, for shirking his duty in this respect.

The second class of cases consists of those addicts who have no legitimate medical requirement for the drug other than the fact of their addiction. It may be said that the addiction itself is a disease, but, if so, the law regards it as a curable disease, insists that it must be cured with reasonable promptness, and permits no treatment of it, involving the use of narcotics, except such as is immediately directed toward a cure. No specific legal rules are laid down as to methods of cure, and here, as in the other class of cases, the physician is free to follow his professional judgment and conscience. Here, however, he runs a certain risk. Prolonged treatment, by gradual reduction of dose, may give rise to suspicions as to the bona fides of the attempt to cure, since that is the method which the shady practitioner most commonly professes to use.

The foregoing paragraphs have dealt with the rights and duties of the physician from the points of view of himself and of his patient. A word remains to be said of his duty, as a citizen, to aid in the enforcement of the law. From that point of view, as well as incidentally for his own greater protection against the danger of having his good faith legally questioned, the honest physician should do all in his power to make it easy for the officials charged with the duty of law enforcement to distinguish clearly between the sheep and the goats. He can best do this by following the advice given above. The suspicions of the officials will naturally be directed toward the man who has a large office clientele of addicts. If, by the cooperation of the medical profession generally, a situation could be created in which every legitimate addict was treated by a reputable practitioner, and exploiters had to confine their practice to the illegitimate class, it would be an easy matter for the authorities to rid the profession of the latter, and in so doing to put a speedy end to the main source of illegal drug addiction.



**LIST OF APPLICANTS LICENSED BY MISSOURI STATE BOARD OF HEALTH BY  
EXAMINATION AT ST. LOUIS, MO., JUNE 17, 18 AND 19, 1919**

Name	School of Graduation	Home Address
Allen, Duff S.....	Washington University.....	Labanon, Mo.
Arenson, Harvey Loeb.....	Loyola University.....	Chicago
Blondin, Edward Alphonse.....	Washington University.....	St. Louis
Braun, Karl Anthony.....	St. Louis University.....	Cincinnati
Brooks, Arthur Charles.....	Washington University.....	St. Louis
Brown, Egbert Eugene.....	Washington University.....	Cape Girardeau, Mo.
Burger, Julius Anthony.....	St. Louis University.....	Tiro, Ohio
Busiek, Urban Justus.....	Washington University.....	Farmington, Mo.
Chapman, Warren B.....	Washington University.....	St. Louis
Clay, Homer Tullock.....	Washington University.....	Farmington, Mo.
Coleman, William Goodwin.....	Washington University.....	St. Louis
Collins, Thomas James.....	Loyola University.....	Cape Girardeau, Mo.
Crotty, William John.....	St. Louis University.....	E. St. Louis, Ill.
Cummings, James Hay.....	St. Louis University.....	St. Louis
Custer, Matthew Lee.....	St. Louis University.....	St. Louis
Day, Anthony Bigelow.....	Washington University.....	St. Louis
Dolan, Henry Francis.....	St. Louis University.....	Prairieburg, Iowa.
Doran, Francis Joseph.....	St. Louis University.....	Cleveland
Dyche, Lewis Lindsay.....	Kansas University.....	Kansas City, Mo.
Ehresmann, Joseph John.....	St. Louis University.....	Carrollton, Ill.
Elliott, Benjamin Landis.....	Washington University.....	St. Louis
Elliott, Loren Ferrell.....	St. Louis University.....	Rolla, Mo.
Finnegan, Charles Robert.....	St. Louis University.....	La Valle, Wis.
Finnegan, William Lee.....	St. Louis University.....	St. Louis
Finot, Phillip Henry.....	St. Louis University.....	St. Louis
Fowler, Kenneth.....	Rush Medical College.....	Dallas, Texas
Freedman, Joseph Herman.....	Loyola University.....	Kansas City, Mo.
Gafney, George Thomas.....	St. Louis University.....	Cleveland
Garrison, George Blaine.....	Washington University.....	St. Louis
Geistweit, William Hy.....	Washington University.....	St. Louis
Gerard, Jules Henry.....	St. Louis University.....	St. Louis
Gilles, Clifford Lawrence.....	Washington University.....	St. Louis
Goldberg, Nathan H.....	St. Louis College of P. and S.....	Nashville, Tenn.
Greaves, Robert Henry.....	St. Louis University.....	Collinsville, Ill.
Gundrum, Lawrence K.....	Washington University.....	Casey, Iowa
Hammitt, Frank C.....	St. Louis University.....	Farmington, Ill.
Halloran, Lester A.....	St. Louis University.....	Des Moines, Iowa
Hardesty, William Loyd.....	Washington University.....	Weston, Mo.
Harvey, George Givens.....	Johns Hopkins University.....	Armstrong, Mo.
Hashinger, Edward H.....	Washington University.....	Kansas City, Mo.
Haumesser, Benjamin George.....	St. Louis University.....	Shumway, Ill.
Hellweg, Walter Edward.....	St. Louis University.....	St. Louis
Heuston, Howard Hull.....	Washington University.....	St. Louis
Hodges, Fred Jenner.....	Washington University.....	St. Louis
Hofmeister, Rudolph.....	St. Louis University.....	St. Louis
Joseph, George Earl.....	St. Louis University.....	St. Louis
Kalloch, Dudley Cromwell.....	Tulane University.....	St. Louis
Kennedy, Thomas R. C.....	St. Louis University.....	Templeton, Ind.
Kilker, Clarence H.....	St. Louis University.....	Egan, Ill.
Kirkwood, Elmer Earl.....	St. Louis University.....	Kirkwood, Mo.
Kohlbray, Carl Otto.....	Washington University.....	St. Louis
Larkin, Martin James.....	St. Louis University.....	Toledo, Ohio
Lawton, Thomas Patrick.....	St. Louis University.....	St. Louis
Lewis, George Vincent.....	Washington University.....	Columbia, Mo.

Name	School of Graduation	Home Address
McCormick, Clarence I.....	St. Louis University.....	Kansas City, Mo.
McMahon, Alphonse.....	St. Louis University.....	St. Louis
McQuillan, Eugene A.....	St. Louis University.....	E. St. Louis, Ill.
Mella, Sherwin E.....	Kansas University.....	Kansas City, Kan.
Michalak, Joseph John.....	St. Louis University.....	Leavenworth, Kan.
Morrison, Marriott True.....	Washington University.....	St. Louis
Munro, Edward E. H.....	Washington University.....	St. Louis
Neun, William Frederic.....	St. Louis University.....	St. Louis
Nicholson, Hubert M.....	Johns Hopkins University.....	Baltimore
Northrup, Lawrence C.....	Nebraska University.....	Kansas City, Mo.
O'Connell, Patrick B.....	St. Louis University.....	Pipestone, Minn.
Omar, Hassan .....	St. Louis University.....	St. Louis
Pelz, Mort D.....	Washington University.....	St. Louis
Pesetze, Samuel Edward.....	Washington University.....	St. Louis
Pope, Charles Hy.....	Barnes Medical College.....	St. Louis
Powell, Rudolph D.....	St. Louis University.....	Macon, Mo.
Powers, Francis Edmund.....	St. Louis University.....	St. Louis
Riordon, Lawrence M.....	St. Louis University.....	Hannibal, Mo.
Rohlfing, Edwin Hy.....	Washington University.....	St. Louis
Scherf, Chrisman George.....	St. Louis University.....	St. Louis
Sellers, Lyle Michael.....	Kansas University.....	Kansas City, Mo.
Shade, Virgil Edward.....	St. Louis University.....	St. Louis
Stofer, Dar Delos.....	Kansas University.....	Kansas City, Mo.
Strub, Herbert Joseph.....	St. Louis University.....	St. Louis
Thompson, Lloyd James.....	Washington University.....	St. Joseph, Mo.
Trippe, Harrison C.....	Washington University.....	St. Louis
Wallace, James Carroll.....	Howard University.....	Kansas City, Mo.
Wallace, Frank Barnett.....	Washington University.....	Holden, Mo.
Walter, Archie Lester.....	Washington University.....	Rockport, Mo.
Wander, William George.....	Washington University.....	St. Louis
Westphaelinger, Hy. F.....	St. Louis University.....	St. Louis
Withers, Sanford M.....	Washington University.....	Clay Center, Kan.

#### LICENSES GRANTED BY RECIPROCITY

Name	School of Graduation	Reciprocating From	Proposed Residence
Baker, Benjamin Garfield.....	Lincoln Memorial University.....	Tennessee.....	Kansas City, Mo.
Black, Donald R.....	Kansas Univeristy.....	Kansas .....	Kansas City, Mo.
Cepelka, Francis Pacak.....	Illinois University.....	Illinois .....	St. Louis
Cheek, W. Carey.....	Tulane University.....	Mississippi .....	Springfield, Mo.
Clasen, Arthur C.....	Kansas Univeristy.....	Kansas .....	Kansas City, Mo.
Graham, James Walter.....	Ensworth Medical School.....	Kansas .....	St. Joseph or K. C.
Hammond, William David.....	Maryland University.....	Maryland .....	St. Louis
Howden, Thomas Lawrence.....	Kansas University.....	Kansas .....	St. Joseph, Mo.
Probstein, Jacob.....	Chicago College of Med. & Surg.....	Illinois .....	St. Louis
Quiring, Walter O.....	Kansas University.....	Kansas .....	Kansas City, Mo.
Sanford, James Robert.....	Vanderbilt University.....	Tennessee.....	Kansas City, Mo.
Simpson, Morris Bigelow.....	University Medical School.....	Kansas .....	Kansas City, Mo.
Thompson, Ross W.....	Western Pennsylvania Univ.....	Pennsylvania .....	St. Louis
Van de Sand, Gerard F.....	Chicago College of Med. & Surg.....	Oklahoma .....	Ste. Genevieve, Mo.
Vander West, P. G. H.....	Chicago Medical College.....	Kansas .....	Stanberry, Mo.
Webb, William Daniel.....	Ensworth Medical College.....	Kansas .....	Buchanan Co., Mo.



## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1919

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH  
HAVE PAID THE STATE ASSESSMENT FOR  
ALL THEIR MEMBERS)

Madison County Medical Society, Dec. 14, 1918.  
Webster County Medical Society, Dec. 23, 1918.  
Cedar County Medical Society, Dec. 30, 1918.  
Pike County Medical Society, Jan. 8, 1919.  
Vernon County Medical Society, Jan. 20, 1919.  
Chariton County Medical Society, Jan. 25, 1919.  
Wayne County Medical Society, Feb. 12, 1919.  
Camden County Medical Society, Feb. 14, 1919.  
Atchinson County Medical Society, Feb. 26, 1919.  
Ralls County Medical Society, Feb. 27, 1919.  
Ste. Genevieve County Medical Society, Feb. 27,  
1919.  
Nodaway County Medical Society, March 24, 1919.  
Laclede County Medical Society, March 31, 1919.  
Oregon County Medical Society, April 7, 1919.  
Cass County Medical Society, April 16, 1919.  
Adair County Medical Society, April 17, 1919.  
Cape Girardeau County Medical Society, May 8,  
1919.  
Newton County Medical Society, May 12, 1919.  
Carroll County Medical Society, July 2, 1919.  
Greene County Medical Society, July 2, 1919.  
Clay County Medical Society, July 8, 1919.

### MISSOURI SOCIETY OF MEDICAL SECRETARIES ELEVENTH ANNUAL MEETING

Excelsior Springs, Tuesday, May 27, 1919

The meeting was called to order at 2 o'clock by the president, Dr. J. J. Gaines of Excelsior Springs. In the absence of the secretary, Dr. E. E. Brunner of Carrollton was appointed acting secretary and read the minutes of the last meeting held at Jefferson City, May 7, 1918. The minutes were approved as read.

The acting secretary called the roll, to which the representatives of the following county medical societies responded: Atchison, Audrain, Barton, Callaway, Carroll, Cass, Chariton, Clay, Clinton, Daviess, Dunklin, Holt, Jackson, Jasper, Johnson, Lafayette, Mercer, Newton, Nodaway, Platte, Pulaski, Randolph, Vernon. Unfortunately many of the secretaries came too late to attend this meeting.

Dr. A. H. Hamel of St. Louis, Councilor of the Twentieth District, submitted a suggestion at the request of the Council of the State Association for the adoption of a system of postgraduate work in the county medical societies as follows: To stimulate and encourage a greater interest in the county medical society work, the Council of the State Association lending every aid, to the end that postgraduate and research work may be profitably utilized. The councilor shall call a conference of all presidents and secretaries in his district to outline a program or joint meeting. He shall then confer with the Secretary of the State Association, who by and with the assistance of the Council will select members of the State Association to read papers, hold clinics and give demonstrations of laboratory and research work to the end that the most modern and progressive medical data shall be made available to members of each and every county society in the state. All this can be brought to every county medical society in each councilor district, by holding from one to four meetings for lectures, conferences, clinics, and demonstrations at each meeting.

That in the councilor districts that have no hospitals and clinics cannot be held it is urged that joint conferences with another district be encouraged.

That in districts in which hospital facilities are available conferences should be amplified by the clinics.

That in those larger districts where hospital and laboratory facilities are abundant, there shall be arranged clinic days which shall be thoroughly systematized and bulletined through the JOURNAL of the State Association and every member be urged to attend.

It is believed that a system as above outlined when put into effect, will bring modern medical problems to all members of the State Association at their homes in a concise, direct manner. It will furthermore give the members of the State Association who do not have modern library facilities opportunity to get much information they would otherwise be denied.

Dr. Hamel further stated that the Council had suggested that this matter will be referred to the county secretaries for such time as in their judgment seemed is right and satisfactory. The details to put this into effect will be left to the secretaries as their body may see fit.

After a general discussion Dr. Hugh Miller of Kansas City moved that the plan be adopted.

Dr. T. J. Rigdon of Kennett seconded the motion and said he was in favor of an organization of that sort, deeming it a great benefit to the doctors in general and to the people.

Dr. Balsley of Joplin seconded the motion stating that he was in favor of research work, and that it will make the meetings lively and bring the members together to learn something new. Jasper County always meets at Joplin or in Webb City once a week, having men from some other society to read papers, therefore, the members never lose entire interest in the work of the society.

The motion carried.

Dr. O. B. Hall of Warrensburg moved that the secretaries' meeting be on the second day of each annual meeting. Dr. Brummall of Salisbury seconded the motion. Carried.

Dr. Hall asked whether other county societies were paying for their men in service. It was stated that most of them were doing so for the year 1918.

The election of officers was the next order of business and the chair called for nominations of officers for the ensuing year.

Dr. Hugh Miller nominated Dr. J. T. Hornback of Nevada for president. Seconded by Dr. J. D. Brummall and Dr. J. T. Rigdon, and Dr. Hornback was elected president by unanimous vote.

Dr. Brummall nominated Dr. R. W. Rea of Plattsburg for first vice president.

There being no other nominations, Dr. Rea was elected by unanimous vote.

Dr. M. O. Biggs of Fulton nominated Dr. T. J. Rigdon of Kennett for second vice president. There being no other nominations Dr. Rigdon was elected by unanimous vote.

For secretary, Dr. Brummall nominated Dr. E. E. Brunner of Carrollton. There being no other nominations Dr. Brunner was elected by unanimous vote.

The newly elected president, Dr. J. T. Hornback was conducted to the chair and in a few words expressed his appreciation of the honor conferred on him.

On motion of Dr. Rigdon the society adjourned to meet at the banquet at 6 o'clock.

Tuesday, May 27, 1919, 6 p. m.

The Society gathered around the banquet table with the president, Dr. J. J. Gaines in the chair. There were forty-two guests present, including the ladies. Dr. Overholser, president of the State Association, delivered an inspiring address which follows:

**Address of Dr. M. P. Overholser, President Missouri Secretaries of Component Societies of the Missouri State Medical Association, Ladies and Fellow Physicians:**

At the close of the year as president of the Missouri State Medical Association, I want to take this opportunity of expressing my gratitude to the secretaries of the county medical societies for the good work they have done during the past year, under the most trying conditions no doubt that the medical profession has ever experienced in its history.

It is said that the devil's trinity is war, pestilence and famine. Two of these, war and pestilence, we did not escape. The unusual and marked disturbing conditions during the past year called for numerous extra duties by the medical profession. A large number of our members were absent from home, on duty in the army camps and in the hospitals of foreign lands, caring for the wounded and sick soldiers, and those who remained at home were heavily burdened with extra duties for the government and the care of the unusually large number of the sick of the civil population, so that it was impossible to keep up the work and interest of the county societies as could have been done under normal conditions.

But when we consider the many and great obstacles we had to encounter we have good reason indeed to congratulate ourselves that we have been able to accomplish as much as the reports show. I feel that great credit is due the officers of the county societies for keeping intact our State Association during the stress, turmoil, and pestilence through which we have passed during the last twelve months.

I regret very much that I could not keep in closer touch with the local county organizations throughout the state during my term as president of the State Association. This was a duty and pleasure which I was compelled to sacrifice very largely on account of physical disability and the conditions named, but you have had my good will, and I feel even more appreciative of your work and interest in your local county society activities because of the hardships and difficulties you were forced to encounter. I am sure with our new president and in times of peace and freedom from pestilence, the interest in county organization work will continue to grow until we have gathered many more of the 6,000 physicians of the state into our organized fold.

This, the sixty-second annual meeting of the Missouri State Medical Association, is called the "Victory Meeting." In addition to the regular scientific program and the usual subjects discussed at these annual meetings of the medical men of our state, we have made an effort at this session to put into our program here and there something to celebrate the greatest victory ever won in the history of the world, a victory in a war for world-wide liberty against world-wide autocracy.

As patriotic citizens and as patriotic physicians, let it go down on our records that the secretaries of the local county societies of our state, who are the "columns of support," the "pillars of strength," the "live wires" of the organized medical profession in Missouri, have contributed their part to the celebration of this victory at the sixty-second annual meeting of the Missouri State Medical Association.

We have displayed before us on this occasion, as you see, two flags, our service flag and the flag of our country. Fifteen hundred and seven stars belong in our service flag, the number of medical men of our state who enlisted in our country's service. Ten hundred and thirty of these were members of our State Medical Association. Sixty-eight per cent. of the physicians of Missouri who responded to our country's call were therefore members of our organ-

ized state body. This is a record of which our Association can well be proud. Our service flag is a flag on which we can ever look with deep feelings of love, respect and admiration, for it represents to us the patriotic men of the medical profession of Missouri who were willing to sacrifice home ties, business interests, and the comforts of life, to endure the dangers and hardships of war for the service they could render the sick and wounded of the great armies which were fighting for human liberty. This flag will ever be a memorial of loyalty, sacrifice and service of these medical men of our state in the great cause of the freedom and liberty of the people of the greatest nations of the world. It will be preserved with care for all time to come in the general office of our State Association. Eleven of these stars are gold. Eleven of the brave medical men of Missouri gave up their lives in order that the principles of free government might live.

By the side of this service flag, we see the flag of our country. As we look on this emblem of our nation, realizing its symbolism, what it means, what it stands for, what it represents to the American people, and see through it why our brave and gallant American soldiers fought, bled and died, on the battle-fields of foreign soil, our hearts cannot fail to be filled with feelings of reverence and love for our country's flag.

Wherever and whenever this glorious ensign of our nation is unfurled or raised where its stars and stripes can float in the breeze, we all hail it with delight and reverence. To us it means individual rights, human progress, human welfare, human justice and human liberty. The strains of the noblest sentiments that ever swelled within the breast of mankind are represented by its stars and its stripes. As it is unfurled before us it speaks sublimely and every part of it seems to have a voice. It speaks of earlier and later struggles. It speaks of victories, and sometimes of reverses on the sea and on the land. It speaks of patriots and heroes among the living and the dead, but before all other associations and memories, whether of glorious men, glorious deeds, or glorious events, its voice is ever of freedom and liberty. It is the symbol of the most holy truths and purposes of the freest people of the world. It means all our forefathers meant in the War of the Revolution. It means all the Declaration of Independence meant. It means all the Constitution of the United States meant and means today. It means all for which our brave American soldiers fought and died in the late great struggle of nations. Our flag carries American history, American ideals and American feelings. It is the embodiment of the noblest principles that ever governed the best liberty-loving people of the greatest nation of the world. We love it for its symbolism, for the ideals and the principles it represents.

In the fight for the preservation of these great principles to the world, and in the celebration of the great victory we have won, we quote the words of the *Puritan Republican* uttered over a hundred years ago: "Resistance to tyrants is obedience to God."

At this meeting of the medical men of Missouri, while we celebrate with delight this victory, and honor those who have served in this great cause, we should also bow our heads with reverence and sadness before these flags in honor of our brave boys, the patriotic heroes and fearless martyrs who fought fiercely and fell bravely on the battle-fields of foreign lands to maintain the honor, integrity, and power of the American flag. May it continue to wave for all time and may the principles it represents never die. May the loyalty, sacrifice and service of the medical profession to our country in the great struggle through which we have just passed add a never-fading luster to the Stars and Stripes—our country's flag.



Dr. Gaines then addressed the meeting and was followed by Drs. Wood, McComas, Hamel, Ferguson and Goodwin, after which the society adjourned to meet in Jefferson City in 1920.

## PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Sixtieth Meeting, May 19, 1919

1. PRESENTATION OF CASES.
2. ANIMATED DIAGRAMS OF THE ORIGIN AND PROPAGATION OF THE CARDIAC IMPULSE (MOVING PICTURES).—By MR. FRED JENNER HODGES.

The moving pictures shown here during the past winter by Colonel Owen from the laboratories of the Army Medical Museum suggested the possibility of simplifying the problem of teaching to medical students the pathological physiology of the heart-beat in various disturbances of rhythm. We find that in order to understand the pathological rhythms which form the basis of some of the pathological cardiac conditions such as heart-block and auricular fibrillation the student must have a clear mental picture of the sequence of the events that occur in the normally beating heart. It is necessary also that the student shall be able to correctly interpret electrocardiograms. Realizing how many students come to the work of the fourth year without a clear working knowledge of these events and their expression in the electrocardiogram, we resolved to save a great portion of the time formerly used to teach practical physiology of the heart, before clinical problems could be taken up, by preparing animated diagrams of the origin and conduction of the cardiac impulse.

The pictures to be shown tonight are the first of these to be completed. You will see a diagram of the heart showing the surface of the right auricle and the region of the primitive sinus venosus and a vertical section through the ventricles with the auriculo-ventricular node, auriculo-ventricular bundle and its branches to the ventricles. Conventional diagrams have been followed. We have attempted to show the origin of the impulse and its conduction after the accepted views of the day. The impulse is represented by a black disc which describes the path taken through the conducting system. Contraction of the ventricles is indicated by heavy black lines perpendicular to the endocardium. No attempt has been made to indicate the change in size of the ventricular cavity during systole for the object of the picture is to demonstrate the development of the electrocardiogram, which is the result of electrical activity only. A normal electrocardiogram is seen to develop at one side of the diagram as the impulse spreads in the normal manner. The time relations are accurately worked out. Above a continuous tracing is formed as a succession of beats is pictured. Normal rhythm, delayed conduction, partial heart-block complete heart block and ectopic beat formation are shown in tonight's films. We hope later to show other abnormal rhythms.

Because of inexperience on our part a great deal of time was needed to make these pictures. We have learned many short routes so that future pictures may be made much more rapidly. I wish to mention the valuable aid given by Mr. Rohlfing in the taking of the pictures.

### DISCUSSION

DR. ERLANGER: I may say that I came here ready to condemn the motion picture method of demonstrating the propagation of the impulse through the heart but Mr. Hodges' exposition has caused me to change my attitude somewhat. I think the motion pictures may

prove of value when employed for the purpose of reviewing what the student has been taught by diagrams and demonstrations, and also when employed for popular instruction.

The main objection to motion pictures for teaching purposes is that the student does not have time to work things out for himself. When the same facts are presented to him by a simple chart, with arrows to indicate the time the impulse arrives at successive points, the student ought to be able to visualize everything that has been shown in the motion pictures; but he then gets his information by working for it and it therefore sticks.

Another objection to motion picture diagrams is the time that is needed to make them. It is a pity to put so much time into something that, as was said by Mr. Hodges, at the present time is merely a point of view.

To repeat, I think such pictures have their value as a means of reviewing the subject and as a means of hastily illustrating what the student is supposed to know. Of course the motion picture is of inestimable value in the reproduction of such things as rare gaits which the student otherwise would never, or rarely, have the opportunity to see.

DR. DOCK: I would like to speak of the clinical advantage of moving pictures in making records of unusual methods or of unusual clinical phenomena. The attempt to show an example illustrates that. We can't get a good tabetic gait to show. Actual cases are rare in our service. Dr. Graves has promised to notify us whenever he has one but so far has not been able to get an example. I don't think it is worth while to show spastic gaits with moving pictures as they are not uncommon. It is an extremely valuable addition to methods of clinical record and of clinical teaching.

I cannot speak so definitely on teaching operations. They have been tried for a long time and in some cases may be useful.

I am very much interested in the work Mr. Hodges has done and I hope he will get something of value out of it.

3. A DIFFERENTIAL RESPONSE OF THE GERM CELL TO ALCOHOL.—By DR. C. H. DANFORTH.

The work reported was undertaken with the hope of throwing some light on the question of whether or not germ cells may react differently, depending on the traits which they tend to produce in the offspring. Hybrid fowls of known ancestry were first mated to normal birds of pure breed and the proportions of different traits appearing in the offspring recorded. The percentage of individuals showing a given trait was taken as an index of the frequency or effectiveness of germ cells capable of producing that trait. The results thus obtained were used as controls for the experiments which in each case immediately followed. In the experiments the hybrid birds were alcoholized twice daily by the inhalation method, all other conditions being maintained as nearly constant as possible. Following treatment with alcohol a new set of offspring were obtained and the proportion of each trait again determined. It was found that the percentage of individuals showing some traits was changed while for other traits no effects were noticed. With brachydactyly, for example, there was an increase of 7, 8, 10 and 17 per cent. in four experiments, while with comb form there was no indication of any effect whatever. These results are interpreted to mean that germ cells which have the power of producing brachydactyly in the offspring also have a greater resistance to the action of alcohol and therefore function more commonly in alcoholized than in normal individuals. In the case of brachydactyly the

rise in percentage was about proportional to the severity of the treatment. Polydactyly seems to have been affected in the same way, but to a much less degree. It is possible that a different dosage or a different reagent might produce like effects with traits such as comb form which were not influenced in these experiments.

#### 4. CHRONIC ENDOMETRITIS.—By DR. OTTO SCHWARZ and MR. C. O. KOHLBRY.

This paper is printed in a previous number of this JOURNAL (July, 1919).

#### 5. ROENTGEN-RAY FINDINGS IN THE LUNGS IN INFLUENZA.—By DR. C. E. GILLILAND.

### TRI-COUNTY MEDICAL SOCIETY MEETING

The Tri-County Medical Society (Bates, Henry and Vernon) met Thursday in regular session at State Hospital No. 3, vice president, Dr. L. H. Callaway, in the chair. At 1 p. m. a visit was made through the wards of the hospital.

At 2 p. m. the scientific program began. Dr. J. S. Newlon of Butler gave a very interesting lecture on complications following influenza. This paper was discussed by Drs. McLeomore, Mead and Robinson.

The paper by Dr. Hall of St. Louis on the roentgen ray was a splendid contribution, dealing mostly with treatment of disease by roentgen ray. He also touched on the subject of radium, comparing radium and roentgen-ray treatments.

Dr. G. W. Robinson of Kansas City lectured on classification of insanity with clinical cases, illustrating each variety. It was one of the best presentations of the subject that has ever been delivered in Nevada.

"The War," by Dr. Mead, was a vivid description of life in the war zone and made you feel that you should have been there to help the boys of the grand Eighty-Ninth Division.

At this meeting each person was handed a slip of paper 5x7 inches. On the top was printed: "What idea or thought has impressed you most favorably at this meeting?"; at the bottom the words, "Please sign and return to secretary." The following are some of the replies:

Dr. Robinson's statement that aspirin is as much a specific for Sydenham's chorea as quinin is for malarial fever.—Dr. Newlon.

Dr. Hall's remark that he always used bismuth meal in abdominal cases treated by deep roentgen-ray therapy as by doing so the radiations were intensified.—Dr. Stebbins.

Dr. Mead's recommendation of the Thomas splint and Dr. Robinson's remarks on the treatment of all agitated cases of insanity, plenty of water, good food, rest, restraint.—Dr. Amerman.

Dr. Craig's fried chicken.—Dr. McLeomore.

I question the advisability of the use of aspirin after the wide newspaper advertisement of the product.—Dr. Dulin.

That melancholia rarely develops before the age of 40 years and is generally accompanied by acidosis. Bicarbonate of soda and large quantities of water is the treatment.—Dr. Davis.

Dr. Amerman's recommendation to give large doses of bicarbonate of soda with aspirin to overcome depressive effect on the heart.—Dr. Berry.

Dr. Robinson's recommendation of using restraints in agitated cases of insanity.—Dr. Craig.

At 6 o'clock the society was entertained by Dr. Craig, superintendent of the hospital, in a most royal manner by a magnificent banquet. This was one of the best meetings ever held by the Tri-County Society.

Those present were: Dr. Hall of St. Louis, Drs. Mead and Robinson of Kansas City, Dr. Arkman of

Fort Scott, Drs. Newlon and Berry of Butler, Drs. Peelor and Stebbins of Clinton, Dr. Cline of Appleton City, Dr. Walker of Harwood, Drs. Amerman, Bohannon, Brown, Callaway, Craig, Davis, Dawson, Dulin, McLeomore, Yater, Willson, Lancaster, Schlicht and Robinson of Nevada. Also a number of nurses of the Vernon and State Hospitals.

A vote of thanks was extended to Dr. Craig and his wife for the royal entertainment. Also to Drs. Newlon, Hall, Mead and Robinson for their excellent lectures. They were elected honorary members of the society. A heavy rain prevented others from Vernon County from attending.

The society adjourned to meet in Butler, Mo., September 4. J. T. HORNBAC, M.D., Secretary.

### BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at the Commerce Club rooms, Wednesday evening, May 21. Twenty-four members present. The president, Dr. A. B. McGlothlan, presided. The minutes of the previous meeting were read and approved.

The subject of a committee to supervise milk furnished in our city, as suggested in a letter received from the Jackson County Milk Commission, was thoroughly discussed, but the opinion prevailed that the milk question was so well handled in Buchanan County, it would be better to let the matter remain controlled by the board of health as at present. However, the secretary was instructed to invite some member of the Jackson County Milk Commission to explain their method of procedure at some future meeting of our society.

The following committee consisting of Drs. DeLameter, Bansbach and Owen, were appointed and instructed to prepare an article for publication in the daily newspapers, placing this society on record as having unanimously indorsed all the bond issues to be voted on May 27, particularly the one relative to the contagious disease hospital.

The scientific program consisted of a paper by Dr. Charles G. Geiger entitled, "The Importance of the Preparation of the Autogenous Bone Graft and Its Application to Its New Environments." This was discussed by Drs. Jacob Geiger, Spencer, Kenney, H. S. Forgrave.

The closing paper was read by Dr. Horace W. Carle, on "Clinical Types of Hypertension." This was discussed by Drs. Schmid, McGlothlan, Spencer, Renaud, Kenney, Kessler.

#### Meeting of June 4

The regular meeting of the Buchanan County Medical Society was held at the Commerce Club rooms, Wednesday evening, June 4, the president, Dr. A. B. McGlothlan, in the chair. Thirty-seven members were present. The minutes of the previous meeting were read and approved.

The following members made a report covering the annual meeting of the Missouri State Medical Association held at Excelsior Springs: Drs. Owens, Byrne, Spencer, Potter, Morton.

The following resolution was introduced by Dr. G. S. Stevenson and on motion was adopted:

*Resolved*, That the administration of anesthetics and surgical assistance for surgical operations require the highest technical skill and professional ability of a doctor of medicine, if the life of the patient is to be protected and saved. No one should assume this grave responsibility who has not received the training requisite to secure the degree of a doctor of medicine.



*Resolved*, That this society depreciates the practice of employing nurses for anesthetists and surgical assistants, and calls on its members to discontinue it and on all nurses to refrain from it in the interest of our patients and their welfare.

On motion by Dr. Morton and seconded by Dr. Lau, the chairman was authorized to appoint a committee of three to develop a body of training anesthetists in this society.

The chairman reserved the appointment of this committee for a later date.

#### Meeting of June 4

The regular meeting of Buchanan County Medical Society was held at the Commerce Club rooms, Wednesday evening, June 18, 1919, with the president, Dr. A. B. McGlothlin, in the chair, and twenty-three members present.

On motion of Dr. W. T. Elam, which carried, the following committee was appointed to secure better telephone service: Dr. W. T. Elam, J. M. Doyle, and W. L. Kenney.

The committee on fee bill reported no progress and were given further time.

On motion of Dr. Daniel Morton, a committee of three was appointed to prepare a proper home-coming for the returning doctors, the event to be celebrated at the Dr. Woodson Sanatorium. The following committee was appointed: Drs. Daniel Morton, L. R. Forgrave, F. H. Spencer.

The committee on anesthetics made the following report:

The committee, after carefully going over the field of those who are obtainable for giving anesthetics and after consulting with them, has arrived at the following conclusions:

There are enough medical men available in this city to give anesthetics for any surgeons at any time and without delay or inconvenience to the surgeons. It has been arranged for two men to be available for ether anesthetics, and one for gas anesthetics at each hospital. It has not seemed proper to ask these medical men to devote their exclusive time to anesthesia any more than to limit the surgeon to surgery, but they have promised to lay aside any private case they may have to keep an appointment with the surgeon. It is not possible for a medical man to make a living on anesthetics exclusively with the necessarily large number of anesthetists in the field, due to the fact that the three hospitals must often be supplied at the same hours, therefore, any one man's capacity to give enough anesthetics to warrant his doing that exclusively is limited.

These men will have their names posted on the bulletin boards of the hospitals to which they are appointed, and surgeons may select them and the hours to correspond; these selections also to be posted so any surgeon may see and know the hours open for operating and the men available for anesthetics at those hours.

For emergency operations, the field of anesthetists will be open and the Physicians and Nurses Exchange will be in touch with these men at all times so the surgeon may, by calling there, get a medical anesthetist at any time.

The following physicians have consented to give anesthetics according to the aforesaid arrangement: Drs. J. M. Allaman, V. R. Wilson, H. D. Kearby, E. B. Kessler, E. A. Gummig, J. Kangisser, E. A. Miller, F. X. Hartigan, H. W. Carle, H. H. Francis.

The anesthetic committee is as follows: Drs. J. F. Owens, E. A. Gummig, E. B. Kessler, V. R. Wilson, and H. W. Carle.

The application of Dr. C. C. Coates for membership received its first reading.

W. F. GOETZE, M.D., Secretary.

#### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, June 12, at 1:30 p. m., with the following members present: Drs. A. R. Elder, president; H. S. Crawford, secretary; W. F. Chaffin, C. S. Dodd, E. M. Griffith, M. P. Overholser and J. S. Triplett. The meeting was called to order by the president, and the following scientific program was carried out:

Dr. W. F. Chaffin, who has recently been discharged from the Army, addressed the society on the subject, "My Army Experience." The doctor gave a very interesting address on his experience in base hospital work at Fort Leavenworth, Kan., and in the large government munition plant near Cleveland, Ohio.

Drs. Griffith and Crawford led in the discussion and gave many valuable experiences of the civilian doctor in the Army. Drs. Triplett, Overholser and Dodd also took part in the general discussion.

Dr. M. P. Overholser read an excellent paper on "Medicine of the Future." He discussed the internal secretions and ductless glands as a problem for future research work of importance. All members present took part in an interesting discussion of the paper.

Under miscellaneous business the board of censors recommended Dr. Fred E. Dargatz of Belton for membership and he was duly elected.

Dr. Crawford made a brief report of the proceedings of the State Medical Association meeting, and a recommendation of the Council regarding postgraduate work by the county societies. This recommendation was unanimously approved by the society, and as soon as arrangements can be made the society desires to avail itself of the advantages of this plan.

The officers were pleased to see more of the out-of-town members present at this meeting, and hope that the attendance at the next meeting will be much better. The next meeting will be held on September 11.

H. S. CRAWFORD, M.D., Secretary.

#### CHRISTIAN COUNTY MEDICAL SOCIETY

The Christian County Medical Society met at Dr. Bruton's office in Ozark, June 13, 1919. Drs. H. J. Wise, president; J. W. Bruton, secretary, and ten other members were present.

Different questions were discussed for the good of the society, and several cases presented.

The question of what to do with the chiropractic was taken up. The prosecuting attorney was called in to advise us what to do.

The meeting adjourned till Oct. 1, 1919.

J. W. BRUTON, M.D., Secretary.

#### CLAY COUNTY MEDICAL SOCIETY

Our second meeting for 1919 occurred at the Major Hotel in Liberty, Monday evening, April 28, with fifteen members present.

Dr. W. W. Duke of Kansas City addressed this meeting on the subject of "Focal Infections." Dr. Duke is an authority on this subject and the society is deeply appreciative of his lecture. He supplemented his talk by a great many stereopticon views, taken from clinical cases, which illustrated his subject fully. Each man present went home feeling that he had been amply repaid for his effort in getting out to the meeting.

In the main, Dr. Duke discussed oral and tonsillar infections and their causative relation to systemic disease. He established complete relations with focal dental infection and the more remote diseases of the kidneys, spinal cord, and the heart. In many instances removal of the offending tooth-root resulted

in prompt abatement of the more apparent dangerous condition.

The pressure on abscessed teeth, occasioned by mastication, may cause no pain whatever, yet it is the most fertile source and the most easy avenue of transportation of germs to the outlying fields which are receptive to the bacteria.

The doctor spoke of many diseases of obscure origin, such as cirrhosis of the liver, interstitial nephritis, tabes dorsalis, etc., all being doubtlessly due to some remote focal infection. He instanced a case, luetic, Wassermann plus 4, which had all specific medication but no relief till tonsils were removed.

For this excellent lecture, the society extended an earnest vote of thanks.

#### Meeting of June 30, 1919

Our third meeting took place at Snapp Hotel, Excelsior Springs, Monday evening, June 30. At this meeting the society promptly revoked the war-time every-two-months meetings, and went back to monthly meetings, our prewar status. Thirteen of the most enthusiastic members were present.

The Clay County Medical Society is ready for the postgraduate work suggested at the recent state meeting. Steps are being taken to get down to business.

Somebody has hinted that this sixty-four year old county society is yet in the full vigor of youth and enthusiasm! Let us continue our efforts to make it one of the best county societies in the state. A good membership will create a good organization. A membership in the county society has become a first-class recommendation.

Our next meeting will be in Liberty on the last Monday evening in July, at which time Drs. George Dagg, Burton Maltby, and W. H. Coffey will address us on war experiences overseas. A good time is anticipated.

J. J. GAINES, M.D., Secretary.

#### GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage Medical Society met in the Court House in Linn, Osage County, on Thursday, April 24, 1919.

Dr. Carroll Smith of St. Louis read a paper on empyema which was freely discussed by the doctors present.

Dr. P. C. Schnobelen of St. Louis delivered a stereopticon lecture on pituitrism. He showed pictures of persons in whom there was diminished secretion of the pituitary gland, also pictures of patients where there was an excessive secretion. This lecture was new to most of the physicians and they followed the lecture with the greatest interest and asked many questions.

Owing to the fact that the above lecture was continued into the night most of the audience that had been waiting to hear the public lecture on health had disappeared, but the few who waited were rewarded by lectures from Drs. Smith and Ives.

Dr. George Ives of St. Louis delivered a very interesting address on the transfusion of blood serum in cases of extreme anemia, which was highly appreciated and discussed by those present.

Dr. Ralph Jones of Belle was accepted as a member of the society.

The next regular meeting will be held in Owensville on Thursday, July 24, 1919.

JOHN D. SEBA, M.D., Secretary.

#### HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in regular session on Wednesday, July 9, at the office and residence of Dr. Simon W. Woltzen, president of the society, in Clinton. Those present were: Drs. Will

P. Bradley, C. W. Head, J. H. Walton, W. R. Campbell, E. C. Peelor, S. A. Poague, N. I. Stebbins, J. G. Beaty, J. R. Hampton, B. B. Barr, President Woltzen and Secretary Douglass. The minutes of the previous meeting were read and approved.

Dr. H. S. Marsh of Kansas City, present by request, lectured on "The Infant Feeding Problem in General Practice," which was very instructive and interesting, showing a thorough knowledge of the subject. He gave the reasons why and how the food should be prepared and the proportions of the constituent parts to be used, the manner of feeding, the intervals of time to be observed, etc. The doctor answered in an understanding way all questions that were asked.

At 3:40 p. m., Mrs. Woltzen served a splendid luncheon that was enjoyed by every one.

The date being so close to Dr. and Mrs. Woltzen's twenty-fifth wedding anniversary made it the more pleasing to all. The thanks of all, with hearty wishes for their future welfare, were the expressions extended to them.

F. M. DOUGLASS, M.D., Secretary.

#### SCOTT COUNTY MEDICAL SOCIETY

Scott County Medical Society met in Fornfelt, July 8, with the following members present: Drs. J. A. Milem, W. H. Wescoat, W. S. Hutton, L. S. Mayfield, G. S. Cannon, and E. J. Nienstedt.

Dr. Wescoat presented a very interesting report of surgical cases, and Dr. Hutton presented a report of his experience with phylacogen, followed by interesting discussions.

E. J. NIENSTEDT, M.D., Secretary.

#### WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society held its quarterly meeting at Rogersville, June 18, 1919. The meeting was called to order by the president, Dr. Sayers, with the following doctors present: E. M. Bailey, J. R. Bruce, W. H. Bollinger, W. J. Rabenau, J. S. Sayers, W. A. Atkins, M. Highfill, and J. P. Werner of this society, and Drs. R. M. Rogers of Wright County Medical Society, W. R. Beatie, W. A. Delzell and W. L. Turner of Greene County Medical Society, and J. W. Bruton of Christian County Medical Society.

The usual routine of business with discussion of cases was taken up.

The meeting adjourned at the noon hour to sit down to a bountiful repast served by the ladies of the Methodist Church, to whom we were all very grateful. This was the finest dinner that the society has ever had and we shall always remember the ladies for their good work.

Business was resumed after dinner. The society voted as a whole to favor and support the bond issue for good roads in this county.

Dr. W. D. Delzell of Henderson, one of the oldest doctors in Webster County and a former member, was voted an honorary member of this society.

A resolution by Dr. M. Highfill on the death of our members or any one of their families was passed and made a part of the records of the society.

There being no further business, the meeting adjourned to hold a public meeting where a very interesting program was rendered to a large and appreciative audience. The program follows: "Experiences of an Army Doctor in This Country," by Capt. J. R. Bruce; music by Misses Hornbeak and Bossard; "Experiences of an Army Doctor in France," by Capt. W. A. Delzell; "The Ideal Physician," by Rev. Mason; "School Boys and Girls of Today," by Dr. M. Highfill; "Medical Ethics," by Dr. R. M. Rogers.

JOHN R. BRUCE, M.D., Secretary.



## THE TRUTH ABOUT MEDICINES

### PROPAGANDA FOR REFORM

**COLLOSOL PREPARATIONS.**—The Council on Pharmacy and Chemistry reports that Collosol Argentum, Collosol Arsenicum, Collosol Cocain, Collosol Cuprum, Collosol Ferrum, Collosol Hydrargyrum, Collosol Iodin, Collosol Manganese, Collosol Quinin and Collosol Sulphur are inadmissible to New and Nonofficial Remedies because their composition is uncertain. In the few cases in which the therapeutic claims for these preparations were examined, the claims were found so improbable and exaggerated as to have necessitated the rejection of these products on this account. The term "Collosol" appears to be a group designation for what are claimed to be permanent colloidal solutions, marketed by the Anglo-French Drug Company, Ltd., London and New York. Were this claim correct, the Collosols should contain their active constituent in the form of microscopic or ultramicroscopic suspensions. The Council was, however, obliged to question the colloidal character of the preparations. A number of samples submitted to the Council had separated and Collosol Hydrargyrum was not a colloidal solution at all; also the ampules of Collosol Ferrum Contained a flocculent precipitate. If either of these two preparations were injected intravenously as directed, death might result (*Jour. A. M. A.*, June 7, 1919, p. 1694).

**PULVOIDS CALCYLATES COMPOUND.**—The Council on Pharmacy and Chemistry publishes a report on Pulvoids Calcyates Compound (The Drug Products Co., Inc.), not so much because the preparation is of any great importance, but as a protest against the large number of similar irrational complex mixtures which are still offered to physicians. These "Pulvoids" are tablets, each of which is said to contain "Calcium and Strontium Disalicylate 5 grs., Resin Guaiac ½ gr., Digitalis ¼ gr., Colchium (Colchicum) Seed ¼ gr., Squill ¼ gr., Cascarin ½ gr. with aromatics." They were advertised among "Approved Remedies for La Grippe and 'Flu.'" . . . The Council admits that salicylates have a field in influenza in that they often afford relief from pain. There is no reason to suppose that a mixture of strontium and calcium salicylate—the calcium and strontium disalicylate of the "Pulvoids" is probably a mixture of strontium and calcium salicylates—has any greater salicylic effect than an equal amount of sodium salicylate. On the other hand, it is worse than useless to give colchicum, squill and digitalis for the relief of such pain. No educated physician will give resin of guaiac and "cascarin" in fixed proportions with salicylates (*Jour. A. M. A.*, June 14, 1919, p. 1784).

**ANTITHYROID PREPARATIONS (ANTITHYROIDIN-MOEBIUS AND THYREOIDECTIN) OMITTED FROM N. N. R.**—New and Nonofficial Remedies, 1918, contained a discussion of "antithyroid" preparations and described two of these: Antithyroidin-Moebius (E. Merck, Darmstadt, Germany) and Thyreoidectin (Parke, Davis and Company, Detroit, Mich.). The "antithyroid" preparations have not realized the expectations of their promoters, and are viewed with skepticism by practically all critical clinicians. Consequently, notwithstanding the cautiously worded claims made for Thyreoidectin, the Council voted to omit this preparation from New and Nonofficial Remedies (Antithyroidin-Moebius had already been omitted because it was off the market) (Reports Council Pharm. and Chem., 1918, p. 50).

**BORCHERDT'S MALT EXTRACT WITH ALTERATIVES.**—Each fluid ounce of this was claimed to contain iodine ⅓ grain, calcium iodid 1 grain, potassium iodid 2 grains, calcium chlorid 8 grains. The preparation

was declared inadmissible to New and Nonofficial Remedies: (1) because it did not contain free iodine as claimed; (2) because it was needlessly complex, and therefore irrational; (3) because the name of the preparation is not descriptive of its composition, but therapeutically suggestive (Reports Council on Pharm. and Chem., 1918, p. 51).

**Cephaelin and Syrup Cephaelin-Lilly Omitted from N. N. R. and Syrup Emetic-Lilly Not Accepted.**—New and Nonofficial Remedies, 1918, described cephaelin (an alkaloid obtained from ipecacuanha root) and listed Syrup Cephaelin-Lilly as a pharmaceutical preparation of it. In 1918 Lilly and Company advised that the name of its preparation had been changed to Syrup Emetic. The Council directed the omission of Syrup Cephaelin-Lilly and voted not to admit Syrup Emetic because the name does not indicate the potent ingredient of the simple pharmaceutical preparation and in that it is therapeutically suggestive. Emetics are powerful agents, and preparations containing them should not be sold under noninforming names. As the cephaelin syrup was the only preparation of cephaelin admitted to New and Nonofficial Remedies and as the alkaloid appears to have no important therapeutic field, the Council also omitted cephaelin from the book (Reports Council Pharm. and Chem., 1918, p. 52).

**COLALIN OMITTED FROM N. N. R.**—Colalin is a bile salt preparation claimed to consist essentially of hyoglycocholic and hyotaurocholic acids. It is manufactured by Rufus Crowell and Company, Somerville, Mass., and marketed by Schieffelin and Company. An examination of the current advertising for Colalin revealed that claims were made for it which were not in harmony with the known actions of bile preparations. As these claims were not substantiated by evidence nor revised in accordance with a request sent to the manufacturer and the agent, the Council directed the omission of Colalin from New and Nonofficial Remedies (Reports Council on Pharm. and Chem., 1918, p. 52).

**DIPHTHERIA BACILLUS VACCINE OMITTED FROM N. N. R.**—The Council directed the omission of diphtheria bacillus vaccine from New and Nonofficial Remedies because the manufacturer of the only preparation of this vaccine advised that its sale had been discontinued (Reports Council Pharm. and Chem., 1918, p. 54).

**EMPYROFORM OMITTED FROM N. N. R.**—Empyroform is a condensation product of birch tar and formaldehyde. The Council voted to omit the preparation from New and Nonofficial Remedies because its usefulness is doubtful and because the agents were not in a position to submit further evidence for its value (Reports Council on Pharm. and Chem., 1918, p. 55).

**FORAL.**—Foral is a depilatory preparation sold with special claims for its use for the removal of hair prior to surgical operation or the dressing of wounds. The Council declared Foral inadmissible to New and Nonofficial Remedies: because it is an unessential and irrational modification of the well known depilatory composed of barium sulphid 2 drachms, zinc oxid 3 drachms and starch 3 drachms, and because it is marketed under a noninforming name and with unwarranted claims (Reports Council on Pharm. and Chem., 1918, p. 55).

**GLYCEROSAL.**—This was said to be a mixture of glyceryl salicylates prepared by heating methyl salicylate with glycerol. The Council declared Glycerosal inadmissible to New and Nonofficial Remedies because unwarranted claims were made for it and because there was no evidence to indicate that it had any advantage over other salicyl preparations, such as methyl salicylate, spirosal, etc. (Reports Council on Pharm. and Chem., 1918, p. 57).

(Continued on advertising page xviii)

# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

Volume XVI

CHICAGO, ILL., AND ST. LOUIS, MO., SEPTEMBER, 1919

Number 9

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### ORIGINAL ARTICLES

#### THE MANAGEMENT OF STREPTOCOCCIC EMPYEMA\*

H. P. KUHN, M.D.  
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Empyema due to certain members of the streptococcus group has been a constant complication of bronchopneumonia occurring during the recent epidemic of influenza. Bronchopneumonia, or lobular pneumonia, has long since been described but there has never been such a tremendous incidence as presented during this epidemic. Streptococcic empyema with a very high mortality has been a constant sequel.

Early in the epidemic very few cases reached the surgical service, the patients dying early in the disease of a severe pneumonia. The pleuritic process apparently arising coincident or shortly after the pneumonia presented no opportunity for surgical interference.

This form of empyema has been recognized by the pediatricians who found it as a complication of bronchopneumonia following the acute exanthemata. Koplik reported 15 per cent. of empyema in children under five years of age due to the streptococcus. Following measles, whooping cough and scarlet fever, Zybelle regards the streptococcus as the most frequent cause of empyema in young children, although above the age of five other organisms are more common.

Late in 1916 and early in 1917 measles and other acute exanthemata were common in the army camps of the Southern Department incident to the mobilization of the militia in the Mexican disorders. There was the usual complication of empyema following these epidemics. Later when the army was mobilized in the various camps, measles gave a high percentage of bronchopneumonia and empyema. Levy and Alexander report about one-third of these cases developing pneumonia and half of those empyema. Occasionally empyema has been noted

without antecedent bronchopneumonia having been determined.

It would seem with the knowledge gained in these previous experiences with empyema that a rational method of treatment would have been developed. The management of streptococcic empyema has been completely dominated by the experiences with pneumococcic empyema. The great frequency of the complication, the high mortality and the tendency to pocket formation, made a complete revision of our previous conception of empyema. This is a process that appears usually coincident with the pneumonia before pleuritic adhesions have formed and not as in pneumococcic empyema, following the lobar pneumonia.

When large numbers of cases began to appear in the hospitals, groups of men forming empyema teams were organized or special members of the staff were delegated to work in this emergency. These teams were made up of men from the various specialties, as roentgen ray, pathology, medicine, surgery. In no disease does the borderline between medicine and surgery so fluctuate.

Experience soon demonstrated that early operation, costectomy, usually resulted fatally for the patient. Graham and Bell in their reports of clinical and experimental work conclude that from a standpoint of pressure relationship, the normal thorax may be regarded as one cavity instead of two. An equilibrium of pressure exists at all times throughout the whole thorax. While these experiments were accomplished with air the authors believe the same conditions hold for fluid. An opening made in one pleural cavity allowing a complete or partial collapse of the lung, the other maintaining at the same time a normal respiration, presupposes the mediastinum to be a rigid partition. On the contrary, it is very mobile and any increase in one cavity is equalized by the other. If, however, the mediastinum has become more or less rigid and fixed incident to inflammation or adhesions, pressure changes in one cavity will have no effect in the other cavity. The bearing of these findings on early costectomy with open

\* Read at the Sixty-Second Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



thorax is obvious. It is quite the rule in streptococcic empyema to have an active pneumonic process coincident with the empyema. Under these conditions, with no adhesions in the pleural cavity and a mobile mediastinum, a costectomy would involve greater risks than could possibly be compensated for by benefits resulting from the evacuation of fluids. It has been our observation that early in the process the treatment is essentially medical and not surgical.

The roentgen ray has been of great service in determining the presence, location and amount of these fluids. Physical signs are often obscure and occasionally misleading. With the roentgen ray we have been able to locate pockets accurately. Needling following the location of a suspicious pocket should be persisted in though no fluid is obtained. Pus is often obtained a short distance from a dry tap. The site for thoracentesis is in the location where physical signs checked by the roentgen ray are most definite. While massive empyema occurs, the tendency is for the accumulation of pus in pockets. These may be interlobular, between visceral and parietal pleura, close to chest wall at apex or base, and in a few instances under the sternum noted as subcostosternal. In the latter location they are difficult of diagnosis and impossible of aspiration. Multiple pockets are common. We have never seen lung abscess. We regard encapsulated masses as interlobular empyema rather than lung abscess.

A bronchopneumonia should be regarded as a potential empyema, for the fluid may be found very early fluctuating in amount and varying in consistency. Rarely is there a fibrous exudate, the fluid flowing freely during aspiration. Later the pus may be thicker or of the consistency of pea soup. The lack of coagulable substances lends these fluids easy of aspiration and negative pressure.

Fluid having been demonstrated in an amount to produce symptoms should be carefully aspirated. Limiting adhesions have not as yet been formed and pneumonia still exists. Repeated aspirations are in order depending on the respiratory situation. Where one cavity exists, the introduction of a Deitrich's or Philipp's cannula with negative pressure may be used. Unfortunately, pockets well walled off are apt to be multiple and no amount of negative pressure in one cavity will drain its neighbor. Negative pressure with lavage of Dakin's fluid is of great benefit. The importance of good drainage with septic fluids cannot be overestimated. It is a good plan to aspirate until physical findings show no longer an acute pneumonic process, then operate. Costectomy is performed under a local anesthetic and a flutter valve inserted. Resection of the rib should be at the lowest point of the cavity by preference though removal of several inches of the fourth or fifth

rib allows some opportunity to break up limiting adhesions for multiple abscesses over the pleura. Bottle blowing is ordered at this stage. When the discharge has subsided, the tube removed and a sinus remains, twenty-four-hour 2 per cent. formaldehyde-glycerine has assisted in closing the sinus.

During the period of active pneumonia, when the patient is intensely septic, glucose in 25 per cent. solution intravenously and sodium bicarbonate and glucose proctoclysis have apparently assisted in clearing up the process. Later, chocolate and candy was urged and sweet egg-nogs and drinks given. As soon as patient is up and about he was transferred to a convalescent squad where, consistent with his condition, he was given suitable exercises to develop his chest and expand the lung. Grenade throwing and shot putting seemed to be well adapted for this end.

Following the general treatment of aspiration until the acute process had cleared up, and later resection, sugars and development drill, our mortality statistics improved. It is to be remembered, however, that late cases were much less virulent than those occurring earlier in the epidemic. At the hospital at Fort Bliss we received a number of cases from passing troop trains after the general epidemic had subsided with us. These cases came from freshly infected districts and a high mortality would be expected. We had better results with them under this management than in those where we were prone to resect early in the disease.

#### CONCLUSIONS

1. Streptococcic empyema occurring usually coincident with the bronchopneumonia presents a different pleural situation than that of an empyema following a pneumonia.
2. Aspiration, maintaining a negative pressure, is indicated to relieve fluids that embarrass respiration early in the pneumonic process.
3. Costectomy should be performed only after the pneumonic process has cleared up and limiting adhesions formed.

Rialto Building.

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## THE MECHANICS OF FLUID IN THE PLEURAL CAVITY\*

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### FIXED FLUIDS

The subject of fluid in the pleural cavity is of interest alike to the surgeon, the internist and the pediatrician. It is one of the commonest conditions met with clinically and is always serious. And yet in spite of these facts, and of the further fact that the diagnosis of the condition is often attended with considerable doubt, there is very little good literature on the matter either in textbooks or current medical journals. In military service, during our great pneumonia epidemics, it was one of the constantly present problems; the possibility of there being fluid in a chest was of all important things the most frequently completely overlooked by medical officers. The physical signs presented in many of these cases were often of the most anomalous nature. Yet when we came to try to get help from the medical library we were most grievously disappointed.

It has seemed to me that much of the misconception arising from these cases has been due to failure to recognize the fact that there are at least two conditions under which fluid can occur in the pleural cavity—one when the fluid is free, and one when the fluid is fixed. The mechanics of the fluid's presence entirely depends on whether you are dealing with one kind or the other. The object of this communication is to point out the significance of this difference. The hypothesis may not be a correct one, but at least it furnishes an explanation which has helped us to understand and explain obscure cases in actual practice. The fundamental idea I owe to an article published several years ago by a member of this association, Dr. William Englebach of St. Louis. Dr. Englebach's article was a clear cut, splendid piece of clinical observation and yet textbook after textbook on physical diagnosis has been published or revised since its publication without a single reference to it. The work of Norris and Landis on frozen sections of cadavers dead of empyema is confirmatory of this work from a different angle.

There are six kinds of fluid occurring in the pleural cavity:

### FREE FLUIDS

1. Transudates, as in cardiac or renal disease.
2. Pyopneumothorax, or hydropneumothorax.
3. Hematothorax (usually free; usually following gunshot wounds).
4. Chylothorax (rare, but of which I have seen one instance).

### 5. Pleural effusion.

6. Inflammatory exudates, following lobar or bronchopneumonia, or other inflammatory processes in the lungs (empyema, and semiclear exudates, containing leukocytes).

The usual description of fluid in the pleural cavity states that it produces dullness on change of position, that it produces bulging of the intercostal spaces, that it displaces the heart if on the left side, that vocal fremitus and breath sounds are entirely suppressed over the fluid. This description holds true fundamentally for free fluids. But in fixed fluids it is practically never true in its entirety. Primarily pleural effusion as well as empyema is an inflammatory product; like any inflammatory product thrown out between serous surface it causes the formation of adhesions; just as the pus from an appendix causes adhesions, or as a salpingitis or cholecystitis causes adhesions in the peritoneum. These adhesions fix the fluid in place. Hence there is no shifting of dullness on change of position, often no extensive bulging of intercostal spaces, no displacement of the heart, and often one gets nearly normal, sometimes one gets increased vocal fremitus, and breath sounds, crepitant and subcrepitant râles and even bronchial breathing over the fluid.

This last phenomenon, the production of vocal fremitus râles and bronchial breathing over the fluid occurs under very special circumstances. The explanation which I have to offer of it is based on theoretical reasoning from observation. In two cases very particularly, however, I have been able to demonstrate not only to my own, but to other physicians' satisfaction, a fact which I think gives great support to the hypothesis. In both of these cases there was an area of dullness in the left back, following a bronchopneumonia; over this area there was heard distinct bronchial breathing; it was not loud, as is heard over a consolidated area in lobar pneumonia, but distant in quality. Immediately after withdrawal of fluid by aspiration, on listening over this area, the quality of bronchial breathing had entirely disappeared. On this basis I believe the explanation to be that the fluid had accumulated between its binding area of adhesions and had pressed the lung backward until the fluid rested on the primary bronchial tree or at least on sufficiently large branches of bronchi to give rise to bronchial breathing and to transmit it directly to the examining stethoscope. After the fluid was removed the lung expanded and the bronchial quality was lost. I have repeatedly observed this phenomenon of bronchial breathing over the massive empyemata of children. The flexibility of a child's chest particularly lends itself to the

\* Read at the Sixty-Second Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



production of conditions which produce this sign (Fig. 1).

Turning now to the facts which support the hypothesis of this paper, I would point out the fact that in primary pleural effusion there is often a large area of dullness which yields only a suprisingly small amount of fluid. Dullness may extend in the back from the bottom of the lung clear up to the angle of the scapula, and be lost beneath the scapula. And yet on tap-

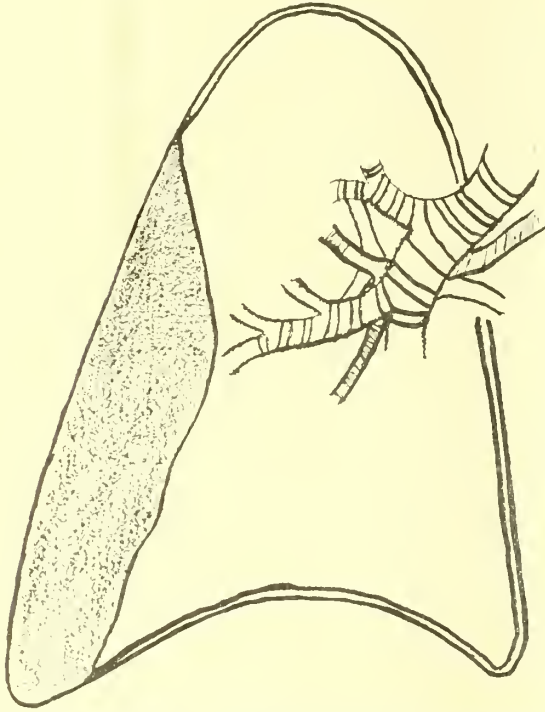


Fig. 1.—Diagram to show the position of a pleural effusion which causes bronchial breathing and increased vocal fremitus.

ping about 150 c.c. or 100 c.c. or even less of fluid is removed. If the ordinary conception of pleural effusion be held, that is to say, of a body of fluid acting according to the statics of fluid in a tub and filling the chest from below upwards, how is one to explain the scanty amount of fluid in these cases? A chest filled with fluid to the angle of the scapula should certainly yield an amount from 500 to 1,000 c.c. or even more. Yet when we conceive of a small amount of inflammatory fluid held in an upright position by bands of adhesions and forming merely a rind over the lung at this point we have adequate and satisfying explanation.

Again, in empyema and pleural effusion the position of the exudate at times is unique and inexplicable on any other basis. Figure 2 is a diagram of a roentgen-ray plate of a case of empyema in which many diagnostic punctures failed to reveal the fluid, and it was only found when the needle was pushed directly through the body of the left pectoralis muscle. Again,

we sometimes see multiple empyema cavities, not connected with each other. Such a case is shown in Figure 3. The primary pus cavity in the left axilla was drained but the other one around the head of the humerus was left intact. The patient continued to run a septic temperature until it, too, was drained. These possibilities have an obvious bearing on surgical intervention.

The outline of these collections of fluid is by no means always regular and a great many puzzling features arise in the matter of diagnosis, in which this factor should be taken into account. The situation that arises is somewhat as follows: From the temperature chart, the leukocyte count, and the general features of a given case, the physician is convinced that there is an empyema. Dullness and diminished breathing is demonstrated over a certain small area. A needle is inserted but fails to draw pus. Several punctures are made, all negative. A final one made hardly an inch away from the negative point produces pus. A case in point is that shown in the radiogram in Figure 4. The outlines of the pus pocket are seen hugging the vertebral margin. In this case a needle punc-

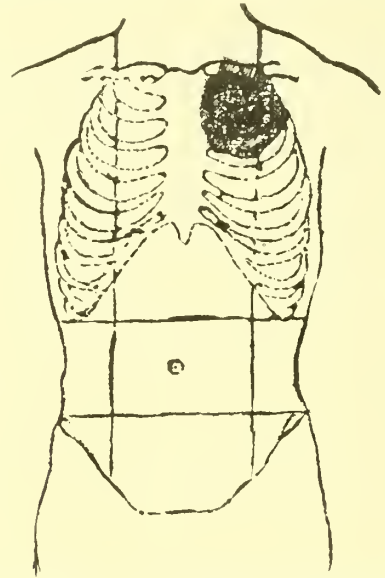


Fig. 2.—Diagram of a radiogram, showing empyema in upper left chest, requiring a tap through the pectoralis muscle to find fluid.

ture at the point marked X in the diagram was negative, while a second puncture at the point marked O, less than an inch away, brought a syringe of pus.

I am far from saying that this explanation satisfies all the puzzles of negative tapping. I have discussed these puzzles in another place and shall not here repeat that discussion. But certainly a very large number of cases fit this hypothesis.



Fig. 3.—Radiogram of a chest with two empyema cavities. The lower one was drained but the upper one was unsuspected until the roentgen ray was taken.



Fig. 5.—Fixed fluid in pleural cavity. Empyema. It does not change on change of position. Patient in upright position.



Fig. 4.—Radiogram of chest. Patient in upright position but empyema cavity seen with fluid still upright, close to vertebral column on right side. Dulness all over right back. No breath sounds audible, except as the stethoscope approached the axillary line. The case gave rise to many diagnoses. Needle puncture at X gave negative results. Puncture at O close to vertebral column produced a syringe of pus.





Fig. 6.—Fixed fluid in pleural cavity. Pleural effusion. Patient in upright position.



Fig. 7.—Free fluid in pleural cavity. Moves on change of position. Pyopneumothorax. Patient in upright position. Chest of this case in reclining position showed entire side dark.

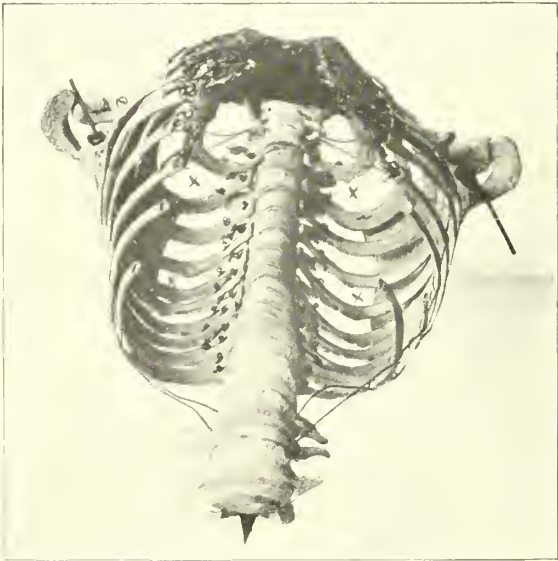


Figure 8

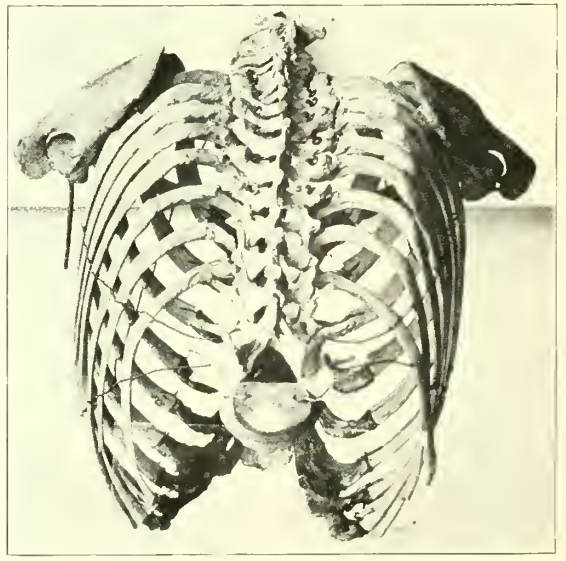


Figure 9

Figs. 8 and 9.—Photograph of a bony thorax, front and back views, to show the lowest point in the thorax in the dependent position. This trough is between the X marks.

One other method of proof we have for these things and that is the evidence furnished by the roentgen ray. This is a most important one. There is no field of diagnosis in which the roentgen ray is more useful than in these obscure inflammatory sequelae of pneumonia. It seems to me unfortunate that the radiologists continue to insist on the use of the roentgen ray in the diagnosis of early pulmonary tuberculosis in which they have such a bad case, and remain silent on this topic in which they have such a good one (Figs. 5 and 6).

The factors which influence the position and the outline of the pleural fluid I cannot explain entirely. Certain cases will always remain mysteries. In most cases, however, I believe three factors operate:

1. The position of the inflammation in the underlying tissues, i. e., the lungs.

2. The pressure exerted by the lung, and the action of the diaphragm.

3. The position of the patient when the fluid forms.

1. The position of the inflammation naturally determines very largely the localization of the fluid if pleuritis supervenes. Not always, however. Occasionally one will see lobar pneumonia in an upper lobe, and empyema in the axillary space or in the back. In pleural effusion too the effusion usually occurs at the lower borders of the lungs somewhere, yet the tuberculous focus beneath, whether it develops before or after the development of the effusion, is usually at an apex. Whether these things represent metastatic pleuritic infections or the gravitation of the fluid downward it would be hard to say. However, the fluid sometimes accumulates over an upper lobe pneumonia, as in Figure 2, previously mentioned. In a certain series of cases studied of sixty empyemata, fifty-six were in the lower part of the chest, most of them definitely back of the posterior axillary line. Of the preceding pneumonias fifty-two had a posterior lobe involvement either partially or entirely or with an upper lobe involvement also.

2. The pressure exerted by the lungs and diaphragm. The lungs act on any fluid which comes between the two surfaces of the pleura as an elastic bag, which exerts a varying pressure during inspiration and expiration but always exerts a pressure. This pressure is produced by the action of the diaphragm. If there is a heavy fluid present and the chest is in a more or less upright position the fluid gravitates to the bottom of the chest cavity; this condition obtains in transudates. When the fluid rises it does not, however, simply push the lung above it, it rises in the space between the visceral and parietal pleura. The upper level of the liquid does not always represent the lower

level of the lung. In inflammatory exudates, such as precede the formation of pus, the lung presses them out in a thin layer over a larger surface than perhaps they would originally attain. At the borders of this fluid adhesions begin to form, aided also by the pressure of the unaffected part of the lung. At the periphery of the effusion internal pressure forces the visceral and parietal pleural together, at which point conditions are ideal for the maximum production of adhesions. It is said, especially in empyema, that the diaphragm is paralyzed and remains motionless. Whether or not this is true and how early, it is certain that some modification of its motions does take place both in empyema and effusion on the affected side. This also helps to make the formation of adhesions more dense once they have become started.

3. The patient who has acquired an empyema has usually been on his back for a period of from ten days up, sometimes reclining and more often sitting in a half reclining position. A glance at an eviscerated thorax shows that the most dependable part of the cavity is in the groove formed by the angle of the ribs, which is situated just back of the posterior axillary line. It is in this groove that over 50 per cent. of all empyemata form. It was the tabulation of this incidence of their presence which led to a study of the anatomy of the chest causing it. In a necropsy if any free fluid is left in the thorax it always rests in this groove (Figs. 8 and 9). Another frequent point of pus collections is close along the vertebral ridge; the pressure of the lung here is weakened by the projecting walls and the collection of pus favored.

The enumeration of these factors does not, I am aware, exhaust the subject of the production factors in the mechanics of pleural fluid but if it awakens interest and leads to further observations, I will feel that its object has been accomplished.

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#### DISCUSSION ON PAPERS OF DRS. KUHN AND CLENENING

DR. HUDSON TALBOTT, St. Louis: These are intensely interesting papers and surely so from a diagnostic standpoint. While surgeons have come to depend quite considerably on the diagnostician, we are nevertheless forced to confirm or reject the diagnosis for ourselves. Therefore we must study somewhat the different phases of the mechanics of fluid in the chest cavity. Symptoms arise principally through the compression of the organs and the displacement of the organs. Our means of diagnosis, as is well known to all physicians here, is inspection, palpation, percussion, auscultation, etc., and what do we see in the case of fluid in the chest cavity? As was pointed out by the essayist, we have first the bulging of the interspaces, which is not always great, nor is there any set of symptoms ever-present, therefore it stands us



well in hand to use all the methods—and then sometimes we fail. Bulging is quite frequently seen in children but not so frequently in the adult. The sick side is usually considerably larger than the well side, but that is not always noticed by the physician. But the use of the cytometer helps us, the use of the lead strip to conform to the chest wall, then compare the sides. Perhaps most surgeons have at some time taken a diagnosis of "fluid in the chest cavity," needed it, and found they were dealing with a pneumonia, a mistake that need not be made. The lagging of the sick side in the respiratory movements, the apex beat of the heart and its dislocation, are means of diagnosis from the inspection standpoint. The use of the Litten sign is important. If you have fluid in the chest you have absence of this sign. None of these things are always present, therefore we are compelled to resort to all of them. There are so many little byways that may take us afield, it behooves us to be careful in our examinations of the chest. There is one fluid that was not mentioned, and that is air. One may be deceived by the hernia of the diaphragm in making a diagnosis of pneumothorax when in reality it is a loop of intestine.

DR. N. I. STEBBINS, Clinton: In case we have more than one pus cavity we must treat each one separately, if they will not become associated. I have found it very successful to use an ordinary sized drainage tube, take a piece of rubber tissue 3 inches, square, make a hole through the tissue about one-quarter the size of the drainage tube, and then by careful manipulation draw the drainage tube through the tissue, which necessarily draws the rubber tissue up alongside of the tube and parallel with it. A silk ligature is tied around the tube including the margin of the hole in the tissue that now lies nearly parallel with the tube. Then having made the resection, the tube (in a sterile condition) is placed in the cavity, after having painted around the edges of the opening with collodion, and then painting the edges of the tissue in the same way and making it airtight. Then I have treated this very successfully with Dakin's solution, using a large syringe, being very careful not to dilate the cavity. After drawing out the pus with the empty syringe, a little Dakin's solution is introduced (not sufficient in quantity to dilate the cavity); then it should be drawn out and forceps placed on the tube to maintain the vacuum, and this strapped to the side with adhesive tape. This should be repeated several times a day, later once a day and then not so often. In that way a constant suction is kept on the cavity, by drawing out the air, the Dakin's solution and the pus, putting forceps on, so the cavity will not dilate, and keeping it controlled. There are no doubt a few cases in which the pressure treatment is not practical. But I believe that a large majority of cases will yield nicely to this procedure, which I have found to be simple and practical.

DR. LLEWELLYN SALE, St. Louis: I always want to smile—not that it is indicative of joy—when I hear the draining of pus cavities recommended, and then think back to the empyemas of 1917 that were operated on and came to necropsy. Our experience, contrary to that of one of the essayists who was able to report that his cases went on to uneventful recovery, was that a large number of cases went on to uneventful death, except that there had been some surgery done on them before they went to necropsy. But in a number of these empyemas that we drained before they went to necropsy, we found collections of pus along the vertebral column that were absolutely inaccessible irrespective of any method that might have been proposed under the present status of surgery. This makes us realize how helpless we are in the face of this overwhelming infection.

As for late operation, I believe that Dr. Lyter put his finger on the pulse of this problem. The question is this: Do we operate on a patient with a serious, compromising pneumonia, or do we operate on a patient who has recovered, at any rate from the infection of the lung? We are all of us, it seems now, favoring late operation in empyema, but I would like to sound a note of warning, not for the purpose of differing with those who advocate late operation, but that we may be able to use the lessons we have learned in this late experience. We must remember that our cases that were operated on early for empyema were cases that came early in the epidemic of 1917. In other words, they were those fulminating, overwhelming infections from which the patient died in twenty-four to forty-eight hours, and from which the patient would have died and did die, whether he was operated or not. Statistics showed a mortality of 50, 75 to 90 per cent. These reports began to pour into the Surgeon-General's Office and they began to be alarmed. Then new methods were proposed and among them late operation, waiting, in other words, until the pneumococcal process was over; and then the reports began to get better, the mortality began to go down, and certainly part of the explanation is that the virulence of the infection began to subside, or the individuals were able to build up a stronger resistance. We must not forget that in the decision of very many of these problems there is more than one factor at work. We remember how our journals were full of new methods—one man had a certain kind of suction pump, another used a No. 12 catheter for drainage, and if you used a No. 13 your patient would not get well; another man put one finger in instead of two, and so on—there were variations in technic without number, and we forgot that the epidemic was subsiding. I believe late operation is the safer step, but in very many of the reports that I have read the emphasis has been laid, as far as decreased mortality was concerned, on the new methods of procedure employed, and they have very little to do with the improvement of the situation.

As to movement of fluid in the chest, of course the main condition under which this is seen is when the fluid is combined with air. In chylothorax the fluid changes just as rapidly as in pneumothorax, the level of the fluid being always horizontal, no matter what position. In one case we thought that was due to the high percentage of fat in the exudate. Whether that is right I do not know.

DR. H. P. KUHN, closing: In the case of empyema, and particularly that incident to a bronchopneumonia, we are dealing with an essentially medical case. The individual is suffering from an overwhelming infection of active pneumonia, and any operative procedure on his chest is liable to produce grave consequences which will mean his death. There is no question but that the early empyemas died with a sickening regularity that was due not only to the virulence of the epidemic—these patients died before they reached the surgical service—but also to the fact that our ideas of empyema were those of pneumococcal empyema. You cannot operate an early streptococcal empyema and get away with it. If you wait until the pneumonic process has cleared up or simply aspirate the fluid, you may expect some results. The improvement in the treatment of empyema was reflected in the fact that the disability was shortened and the mortality lowered. Early in the epidemic apparently no method of treatment seemed to avail, but with the lessons we have learned and the aids we now have in the way of roentgen ray, etc., I think certainly our treatment of streptococcal empyemas will bring better results.

DR. LOGAN CLENDENING, closing: I am very sorry, indeed, that I did not have access to Dr. Lyter's paper, but I hope he will send me a reprint.

I did not mean to claim any originality by this contribution at all. As a matter of fact, both Dr. Lyter and I were preceded by the work of several people who, while they did not exactly state this proposition in so many words, suggested the idea. Curiously enough, some of the best work on fluid in the pleural cavity has been done by Missourians. Dr. Englebach of St. Louis, back in 1911, with Dr. Carman, published a paper on pleural effusions in the *American Journal of Medical Sciences* in which this matter of the fixation of the fluid was touched on and proved by roentgen-ray pictures. Then Dr. W. J. Calvert of Columbia did some very interesting work on empyemata, especially pulsating empyema. Later Dr. Norris and Dr. Landis of Philadelphia, approaching the matter from another angle, not by using the roentgen ray, made some sections of frozen cadavers with empyema cavities in the chest. However there is nowhere so far as I know, in the literature, unless it is in Dr. Lyter's paper, a clear-cut emphasis of the distinction between free and fixed fluids.

### IRRITABLE HEART OF SOLDIERS\*

J. C. LYTER, M.D.  
ST. LOUIS

To those physicians who served on the cardiovascular boards in our army cantonments was given an opportunity to observe a vast number of cases of the symptom group designated by various and different physicians as effort-syndrome, irritable heart of soldiers, disordered heart action, neurocirculatory asthenia, and functional cardiovascular disturbance.

Since DaCosta first described this group of symptoms under the name of irritable heart of soldiers, there have been many volumes written on the subject, many of these having been contributed since the outbreak of the war just closed.

The very fact that the group of symptoms has received so many names, none of which are in any direct way specifically applied to the pathological physiology responsible, immediate or remote for the appearance and perpetuation of the symptoms, bears the most decisive testimony that the fundamentals of this symptom group are not at all understood. The various names thus far given to the symptom group by different students leads one to believe that the cardiovascular mechanism is primarily the site of physiologic disorganization. To attribute the symptoms presented by these patients to a functional disorganization of the cardiovascular system is no more logical than it would be to so attribute the symptoms of hyperthyroidism or pulmonary tuberculosis, presenting, as do many of the cases, pronounced cardiovascular symptoms. In our study of this clinical picture at

Camp Custer we earnestly endeavored to expose the primary causative factors by classifying all patients who entered our clinic for any cardiovascular disease whatsoever.

After much study of the entire group of patients three classes were formulated, depending on the physical, mental and nervous constitution of the patients thus classified. The first problem was to separate from these patients those whose cardiovascular symptoms could be attributed to some well defined and recognizable pathology, as hyperthyroidism, pulmonary tuberculosis, primary cardiovascular diseases, and neurological conditions. This accomplished, at least to our satisfaction, we called class one the hyperplastic individual, because of his short stature with short heavy bones of the extremities, short and thick vertebrae, short and thick neck, broad shoulders and hips, heavy musculature, a rather profusely developed crop of hair over the body, a pendulous or full abdomen and a florid complexion. This type of individual develops a rather secure but sluggish mentality, is practically free from any excitable or irritable features, reveals neither mental nor physical alertness, nor a highly developed individuality. Physical examination of this class of patients will reveal small pupils, narrow palpebral fissures, a broad aortic arch, broad heart, high diaphragm, a stomach that lies above the umbilicus, and a short colon. These patients are apparently predisposed to sclerotic changes in the heart, blood vessels, kidneys and liver. They also offer a poor resistance to the acute infections, especially typhoid fever and lobar pneumonia.

The second class we termed the hypoplastic individuals: Peabody has termed these the constitutional inferiors. These are slender individuals, the bones of the extremities long and slender, the vertebrae long and narrow. The ribs slant downward and form a long, slender chest, with a narrow subcostal angle and floating tenth rib. The muscular development ordinarily is poor, the skeletal muscles being long and thin, apparently the very fibers of the muscles are long and narrow. The neck of these patients is long and slender with a prominent larynx. There is a scanty development of hair, the skin is soft and smooth and the face far from florid.

Physical examination will reveal wide pupils, wide palpebral fissures, hypoplasia of the cardiovascular system, with a small, centrally hung heart and narrow aorta. The stomach, small intestine and transverse colon lie in the pelvis. The hands and feet are cold and moist. These people have an alert and original mentality. Their ideas are the product of their own efforts. They have a highly developed individuality, a vivid imagination and are given much to worry and excitement. They have a positive con-

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



sciousness that they were not developed for physical combat. As a rule they have sought a vocation which required mental but little or no physical effort. Among these people we find tuberculosis, hyperthyroidism, the psychoses, diabetes and various nervous disturbances. This class presents the great majority of the patients sent to the cardiovascular board for neurocirculatory asthenia. Anyone studying this clinical syndrome closely is at once impressed with the fact that the greater number of the symptoms presented by any one of these patients can be referred to sympathetic irritability. The wide pupils, tachycardia, dyspnea, nervous excitability, constipation, and the cyanosis and sweating of the hands and feet, all can have their origin in sympathetic stimulation. Because of the various symptoms indicative of sympathicotonia, and because some of these patients have distinctly enlarged thyroid glands, some clinicians, especially those with only slight opportunity for observing this symptom group, attribute the symptoms to hyperthyroidism or a disturbance of some of the other endocrine glands. The work of Peabody and his associates at the Lakewood General Hospital, revealing as it did an absence of any acceleration of the basal metabolism in these patients, contradicts any idea that hyperthyroidism has anything at all to do with the production of these symptoms. Since this work the definitely hyperthyroid cases are not longer considered as belonging to this group.

This work of Peabody and his associates should impress more and more that group of physicians who have so enthusiastically labeled every obscure tachycardia, nervous irritability, chronic constipation and cardiovascular instability, as hyperthyroidism. Likewise there is no reason to suppose that these symptoms result primarily from a disturbance in the secretory functions of the older endocrine glands. This group of patients furnish the greater number of the cases of neurocirculatory asthenia, most probably because of their psychic constitution. It is difficult to understand how these symptoms can be attributed to anything other than a conflict of desires arising within the individual's own mind and being reflected to the cardiovascular system through the autonomic and sympathetic nervous systems. This group of people being an emotional, imaginative and excitable class would naturally furnish the greater number of examples of this symptom group. These patients as a rule had sought positions in life requiring the assumption of little if any responsibility and practically free from physical exertion. They had no desire to fight their country's battles, especially to the extent of entering into physical combat; neither would their pride permit them to remain at home and be looked on as patriotic delinquents. Herein lies the conflict of emotions the result

of which is a psychical disorganization expressing itself through the vagal and sympathetic nervous systems, as a sympathetic irritability affecting mainly the cardiovascular system.

That there is some disturbance of the internal secretory glands no one would doubt, but this is purely an associated phenomenon and is not concerned at all primarily. From this attitude one must assume that neurocirculatory asthenia is simply a group of symptoms resulting from an emotional disorganization in a subject who has developed an imaginative, emotional and irritable mentality, these emotional stimuli manifesting themselves through the sympathetic nervous system probably by causing an over activity of the adrenals. The most potent argument in favor of this conception of neurocirculatory asthenia is the notable effect of the armistice on the clinical condition of these patients.

The citation of one almost typical individual will suffice to reveal the effects of the armistice on this clinical condition. A young man had been visiting our board weekly with a pulse of 144, respiration 32 and with the usual signs of neurocirculatory asthenia present proportionally. Two weeks after the signing of the armistice he came up for discharge with a pulse of 68 and respiration 18, the other signs having disappeared. The third class of individuals we designate the plastic type because their physical makeup would rest approximately midway between the two extremes just described. This type of individual would be considered the average physical build, with an average intellect; unless it has been specifically developed or unwantonly permitted to atrophy. The physical build conforms very well to the mental constitution, unless there has been a change in the natural trend of the physical development because of special exercise; or tendencies in the opposite direction because of the lack of exercise; or possibly the development of some diseased process. This class of individuals under long strain, worry or excitement, may manifest some of the nervous instability characterizing the hypoplastic individual. Likewise we at times see a definite symptom group, designated neurocirculatory asthenia, in these individuals and where it does exist there is usually some explanation which is rather extraordinary in these patients' lives. They have been subjected to some unusual mental strain because of some development in their domestic, social or financial circles at the time or following their entrance into active service.

In conclusion we would say that neurocirculatory asthenia develops in an individual whose nervous constitution so rendered him predisposed to any excitement, strain, anxiety or ideal conflict.

Frisco Building.

## DISCUSSION

DR. M. A. BLISS, St. Louis: A good many of these cardiovascular cases come before the neuropsychiatrist, because of the fact that the two fields come very close together. We had an internist in the service who insisted that all these cases were hyperthyroid, while I insisted that only relatively few were hyperthyroid. The thing I wanted to say about them is that they are constitutional. Whether their glandular hypersecretion is secondary or not, you cannot make soldiers of these men. There is no form of care or treatment devised during the war that changed these individuals, either physically or mentally, so as to enable them to be good soldiers, and I think the important point to recognize is that they are constitutionally inferior and are not capable of such restoration as would make them efficient men.

DR. J. C. LYTER, closing: Dr. Neilson in his discussion invaded one of the most difficult fields of internal medicine, namely, the relation of the sympathetic and vagal nervous systems to chronic infections and chronic intoxications. It is essentially too broad to be discussed here.

These men are constitutionally inferior; whether this inferiority is due to tuberculosis or to hyperthyroidism of early childhood is not entirely settled. The whole basis probably rests on the physiology of childhood, the closing of the bony and periosteal nuclei with their relations to the sympathetic nervous system, and to the glands of internal secretions. We know that the internal secretory organs are absolutely under the control of the sympathetic system, and any disturbance in the sympathetic system in turn disorganizes these glands. Cannon has specifically demonstrated this action over the adrenals. The same is most probably true in the case of the thyroid.

Clinical experience tells us that children from twelve to seventeen who have a chronic, slowly progressive tuberculosis, reveal all of the symptoms of sympathetic irritation, so that most probably some of this inferiority is to be explained on the basis of childhood tuberculosis. Although this cannot be sought to explain all of the hypoplastic types, some of the hypoplastic phases are most probably hereditary.

## BASE HOSPITAL NO. 21\*

WALTER FISCHEL, M.D.  
ST. LOUIS

I will have to admit that I have never been on a battlefield. I tried to get there but the M. P. would not let me. It is with great pride, however, that I come here as a representative of a strictly medical body which was sent from the state of Missouri and from the greatest city of that state, and which was among the first of the military forces of the United States to set foot on foreign soil.

As you know, it was April 6, 1917, that the United States declared a state of war to exist with Germany. I think it was one month later when the first medical unit sailed from the United States, and within a few days of two months from the time of that declaration the

United States had six base hospitals and some 200 or 300 isolated medical men serving in France against Germany and with the Allies. It is my purpose to tell something of the experiences and workings of one of these base hospitals, No. 21. This unit was organized in the summer of 1916 at which time there seemed to be fear of war with Mexico. Dr. Fred Murphy was requested by the Red Cross, at the suggestion of the Surgeon-General's Office, to organize this hospital unit. He did this to the extent of enlisting a full staff of medical officers, a full staff of nurses and what we thought was an adequate staff of enlisted personnel. During the succeeding winter a complete equipment was purchased and stored for a 500-bed hospital. On April 21, 1917, Dr. Murphy received a wire from the Red Cross asking: "Can your unit go to Europe, and how soon?" He replied, "Yes, in one week." They did not get off quite that soon but in exactly four weeks the unit did sail from New York on the SS. St. Paul and one week later landed at Liverpool. Most of us went there with rather vague ideas. We were not a military organization. I do not think any of us knew how to salute, and if we had been asked to "form fours," I hate to think what would have happened. But we went with a great deal of enthusiasm, and our only fear was that the war might be over before we would get there.

We landed in Liverpool and spent ten delightful days in England. Many had been there before and had arrived at the conclusion that the English were a delightful people but did not think very much of Americans, and it was pretty hard to get to know them. We found this time that they had changed their opinion of us, and we had to change our opinion of them because they did everything that was possible to make us feel we were welcome and, what was of very great importance to the doctors, we were given every facility for seeing the way they were handling patients in the home hospitals. It was a great pleasure to see the way the English women who had not had medical training, went to work. They surely did splendid work. As many of you know, the English nursing service before the war was not a very perfect service, so when there was a tremendous call for trained women the English lay women stepped in and filled the breach nobly. In those ten days we had a wonderful opportunity to see how these women handled the sick and wounded soldiers.

On June 12 Base Hospital No. 21 arrived at Rouen, France, were marched out from the railroad station five miles, and into British General Hospital No. 12. This hospital had accommodations for slightly over 1,300 beds, and had a complete staff of British medical officers and

\* Read in the Victory Session at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



men. We arrived in time for breakfast and after that most of their staff were marched out. They said, "Here is the hospital. It is about half full of patients but probably tomorrow you will have the other half filled." They did not know the expression "Go to it," but that is what they meant. We did the best we could, and from that moment until Christmas of 1918 there were very few idle moments for the members of Base Hospital No. 21. Fortunately for us and for our patients, the first weeks during the summer of 1917 were not what we would now call rush weeks. At that time we thought we were pretty busy but as we look back now we say we were loafing then. We would have possibly a daily admission of fifty to sixty patients and the same number going out. Later on during the rush time of 1918 we thought nothing of receiving 500 or 600 patients a day and discharging the same number. It was very fortunate for us that the first days were light because the handling of wounded men is a very different proposition from the handling of medical and surgical cases in civil hospital practice, and although we were fortunate in having several officers who had previously seen service in the war and had been there several months, still for the majority of us it was an entirely new field. From the medical point of view it was an entirely new field. Those of you who have had the privilege of being over there know how the tendency was to call everything, even familiar conditions, by new names, so we were at once struck with a lot of new diagnostic terms, such as P. U. O. and D. A. H., and other names that we did not know, so in some ways we had to learn medicine over again.

During August, 1917, the British started their famous series of attacks which were intended to break through the German lines in Flanders and to reach the coast beyond Ostend, in other words, to do away with the submarine menace. All of you of course know that this series of attacks was very disastrous to the British army, as the casualties were enormous and the results gained seemed so small. They did finally, however, after two months of the heaviest kind of fighting, succeed in taking the famous Paschendale ridge, and during these months the work of the hospitals was much heavier. Let me give you an idea of the condition in which these men were brought down to us. Our hospital was one of a group of thirteen base hospitals situated in and about Rouen. We were at that time about 80 miles from the nearest part of the line and about 100 miles from where the most intense fighting was going on. In Flanders when a man was wounded he was almost drowned in mud before he could get back to the first station. They could only get them back at night. He was then rushed back to a casualty clear-

ing station, and it would be twenty-four to thirty-six hours before he could have surgical attention. There they did what was necessary to be done and he was put on a train and we were lucky if at the end of another twenty-four hours he arrived at the nearest base hospital. By the time they reached us most of these men were badly infected, many of them showing the horrible signs of gas gangrene and very often the only thing we could do was amputation or horrible slashing to try to save the man's life. The impression which that kind of work made on a group of people from civilian life was more than I can well picture to you. I think in a way it was harder on the nurses than on any of us because they had to be with the individual patients more closely. The doctor would come in to see the patient and say, "Take him to the operating room at once," and in the operating room they would take off a leg or arm or do whatever was necessary; but the nurse had to work with these men and listen to their complaints, or not complaints, because it was wonderful the way they endured without complaining. But it was the nurses that showed evidence of the worst strain.

It was also at this time that we encountered the first evidences of the German use of mustard gas. I shall never forget the first cases which we saw. They happened to be men who were not in the fighting units, but in the transport service. They had been driving convoy wagons with supplies from one of the small towns six or seven miles back of the line. They said they were driving carefully but were caught by an exploding shell. Their mules stampeded and they forgot everything in their efforts to save the mules. About six hours later they found their eyes bothering them and in a few minutes they could not see. They were sent back to the first medical unit, about thirty-hours back, and by the time they arrived at our hospital their eyes were completely closed from the conjunctivitis. They could not speak, because the gas had affected the mucous membrane of throat and larynx. Their entire bodies were a mass of blisters. It made everyone of us feel that we wanted to get away from the hospital, get a gun and go out and fight. It gave us all a curious sensation. Later on, as we saw these poor men coming in by the hundreds and thousands, we became more used to it, but the shock of the sight never wore off. Until the men at the front learned to control their men better as regards preventive measures we men at the base hospitals were almost helpless in treating the condition.

During that late fall also many of the men at our hospital—and this applies to all the base hospitals serving with the British—were sent to the front line to serve in casualty clearing sta-

tions as operating teams, and there they had the opportunity to see the wounded at closer range, and also the more or less pleasant experience of being under shell fire.

During the winter months of 1917-1918 one might think a base hospital would be more or less of a loafing place, but during that time our daily admissions ran from fifty to seventy-five, and the hospital was always at least three-fourths full, chiefly however with sick, and to those who have not had the opportunity of following the medical service of the army in war time it may be a surprise to know that out of 61,000 admissions to our hospital during the time of our service 31,000 were admitted because of medical diseases. They had not been wounded but were sent down as sick. So that during the winter months we were especially busy.

Then came the fatal month of March, 1918, when it looked as if the Germans would break through and end the war. At that time it looked so imminent that all the hospitals in our area were warned to be ready to pack up and get out. Fortunately, we did not have to do this and the enemy was stopped. Soon after this the Germans began their systematic air raids, and we were treated every moonlight night (and some others) to the sound of the anti-aircraft guns and the whir of falling bombs. Fortunately, none of the bombs fell in our area; the nearest was about a mile away.

Dr. Pearse, in reading the list of those men who gave their lives, mentioned the first one as Lieutenant Fitzsimmons. He was with a Chicago unit and was the first American physician to give his life. That was the time of a raid when the Germans were aiming at a big munitions dump and dropped a bomb on a hospital. Lieutenant Frazier was also mentioned—he was at our hospital for about two months. He was not regularly attached to the unit but was sent down convalescing from a bad attack of trench fever. He stayed and worked with us and during that time everyone learned to love him and to admire his tremendous pluck. He often said to me, "You know I am scared to death every time I get out there, but yet I have one ambition in life." I asked him what it was, and he replied, "To get a military cross." He wanted the decoration for bravery under fire, even though he was scared to death, as he put it. We tried to persuade him to stay with us, because we needed him, but he wanted to get his military cross. I have not heard whether he did get it, but I hope he did.

From March on to the end of the year it was simply one long drill—thousands and thousands of men coming in, doing the best we could for them and sending as many as possible back to

the line. The average duration of a patient in our hospital would have been four days, so you see we were busy chiefly in seeing the men, doing what was necessary and getting rid of them. We had very little chance to do so-called reconstruction work. That was all done in England. We did however have twenty beds set aside in our hospital for face cases—men whose faces, or part of them, had been blown off by a shell—and we had two men, a surgeon and a dentist, who tried to repair these men as best they could.

I will not weary you with further details. It is a long story, with a dark side and a bright side. I hope Dr. Proetz will be able to show you some of the bright side in his pictures. But those of us who had this rare privilege certainly are not to be praised. We are to be envied because we were given this tremendous opportunity, but I am sure that the other physicians and surgeons, had they been given the same opportunity and been fixed so they could go, would have been glad to go. If this unit has made in any sense a good record I think it should stand as a record for the medical profession as a whole and especially for the medical profession of the state of Missouri.

Humboldt Building.

#### THE HOUR-GLASS UTERUS\*

F. E. WILHELM, M.D.  
KANSAS CITY, MO.

Given a primipara whose bony pelvis offers no unusual obstruction to delivery of a babe, a fetus of average size with presentation and position normal, the obstetrician smugly folds his arms and begins his vigil. If the membranes rupture prematurely he accepts the likelihood of a prolonged labor and prepares for a longer waiting.

There occurs in a few confinements a definite obstruction to the passage of the fetus from the uterus, in a physiologic stricture of the uterus, which forms an hour-glass with the ring of Bandl as an impassable constriction at or near the point where the peritoneum is reflected from its lowest attachment to the uterus.

Most current textbooks mention this condition in a half-apologetic manner, usually with an afterthought that there is some debate as to its actual occurrence. It is my conviction that once encountered, an unyielding contraction ring will so tax the patience and ingenuity of the accoucheur that he will not deny the existence of the ring, nor decry its importance in obstetric practice.

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



It is my purpose to call attention to this very unhappy condition, by the brief recital of six cases recognized in my service. Most of these cases occurred after long hours of labor with unsuccessful attempts at delivery per vaginam.

CASE 1.—Mrs. C., aged 33, para 1, Dr. H. L. Hess, March 7, 1913. Seen after sixty hours of labor, during which time several attempts at forceps delivery had failed. Examination showed cervix fully dilated, L. O. A., bony pelvis normal, head not engaged, membranes ruptured, fetal heart absent.

As I had done several successful high forceps deliveries up to that time and this one looked easier than any which had been done, this procedure was attempted with great deliberation and confidence. Moderate traction was made several times after an easy application of the forceps but no progress resulted. Finally the forceps were discarded, the hand was passed around the presenting head and upward, until an obstruction was encountered at the lower part of the baby's neck; a band in the uterus was tightly clasping the upper part of the trunk of the fetus. Two fingers finally were slipped beneath this ring and several unsuccessful efforts made to pass the obstruction. I then realized why the forceps had failed for Dr. Hess and myself, and that my first case of contraction ring was a reality, and so informed Dr. Hess.

Repeated efforts to dilate the band with my fingers met with very slight success. Assured that the fetus was dead, the fontanelle was perforated, and the skull collapsed, the head was reduced back through the constriction, the feet were brought down and the long wedge secured by podalic version made the delivery quite easy. Placenta delivery uncomplicated in a short time. During all this procedure the mother was under deep surgical anesthesia. Mother made uneventful recovery.

CASE 2.—Mrs. W., aged 30, para 1, Dr. William Rice, June, 1913. Labor ushered in by rupture of the membranes, little pain for twenty-four hours, followed by hard pains for twelve hours, at which time I was called; patient was suffering greatly. Vaginal examination showed bony pelvis normal, membranes ruptured, cervix fully dilated, vertex unengaged. Fetal heart indicated babe was in good condition.

Forceps were easily applied and moderate traction several times showed no gain. Remembering the case of a few weeks previous, a hand was passed beyond the head, encountering a constriction band about the baby's neck. Fetal heart showed babe still in good condition. Morphine 0.25 grain hypo. brought no results after one hour. Deep surgical anesthesia (ether) for an hour without any manipulation made no impression on the constriction. Manual dilatation succeeded in about thirty minutes; a version was done, rather slowly, with a still-born baby. Placenta delivery normal. Mother had uneventful puerperium. Two years later this mother delivered unaided, after seven hours' labor, a 7 pound living child which is alive and healthy.

CASE 3.—Mrs. B., aged 26, para 1, Dr. E. T. Pendleton, May, 1914. Patient lived in country near Wellsville, Kan. Labor began Friday night. Saturday afternoon Dr. Pendleton attempted forceps delivery at her home but failed. On further examination he discovered and diagnosed a ring of Bandl about the neck of the baby. A severe storm had incapacitated telegraph and telephone service, so he brought the patient to the Southside Hospital by train and ambulance Sunday forenoon, where I saw her about

noon, perhaps forty hours after labor had begun. Dr. Pendleton expected cesarian section.

Examination showed fetal heart O. K. Vertex, L. O. A., cervix widely dilated, bony pelvis normal, membranes ruptured, ring about neck of babe very hard and unyielding. Decided to try vaginal delivery.

Deep anesthesia (ether) for an hour brought no relaxation. Manual dilatation was then begun and in thirty minutes the ring was partially dilated. Forceps were applied and delivery of the baby was accomplished after several attempts. Fetal heart beat continued for twenty minutes after delivery but no breathing. A pulmotor was used on this case unsuccessfully. Mother made uneventful recovery.

I cannot refrain from paying tribute at this time to a country doctor for making a correct diagnosis on this unusual condition. Dr. Pendleton has since fallen a victim of nephritis. He was a keen observer who would have performed creditably in any medical company.

Four years elapsed before another case of this sort came under my observation.

CASE 4.—Mrs. M., aged 32, para 1, Dr. Ben Jacobs, May, 1918. Patient had been in labor forty-eight hours when seen. Very hard pains at five minute intervals.

Examination showed fetal heart good, vertex, L. O. P., cervix fully dilated, membranes intact, bony pelvis normal. Advised and gave morphine 0.25 grain hypo. which gave several hours' quiet and some sleep. Later patient was moved to the Christian Church Hospital, where examination showed fetal heart good, membranes ruptured, persistent L. O. P., ring of Bandl tightly about neck of babe, no engagement. Deep ether narcosis. Dr. George Mosher and Dr. Buford Hamilton were invited in the delivery room to examine this case and they helped in manually dilating the ring which was followed by a version. Fetal heart heard about twenty minutes after delivery but no breathing. Mother made slow but uneventful convalescence.

This mother unaided delivered a fair sized living baby eleven months later after a short labor.

CASE 5.—Mrs. Z., aged 30, para 1, Dr. Harry Mather, February, 1919. At onset of labor patient went to St. Joseph Hospital. While under preparation for delivery, the membranes ruptured and the cord prolapsed. When seen by the author, two hours after labor began, fetal heart was not heard, babe probably died soon after prolapse of cord.

Examination showed cervix fully dilated, vertex, L. O. P., no engagement, small fetus.

On attempt to push back the head to accomplish a version, a contraction ring was discovered about the baby's neck. We decided to try manual dilatation and version. Under deep anesthesia (ether) Dr. Mather alternated with me in attempting dilatation manually, which was accomplished at the end of two hours' hard effort, sufficient to permit the reduction of the head following a craniotomy. This was followed by a version. Mother made an uneventful recovery.

This case was the shortest labor and much the longest and hardest to dilate.

CASE 6.—Mrs. P., aged 32, para 1, March, 1919, author's case. Examination showed vertex, R. O. P., per rectum. After four hours light labor there were twelve hours of hard frequent pains at two to four minute intervals, during which time morphine  $\frac{1}{6}$  with scopolamine  $\frac{1}{250}$  were given twice with very slight

effect on uterine contractions. Vaginal examination now showed cervix fully dilated, membranes intact, L. O. P., no engagement, rather small bony pelvis. Decided to attempt rotation of body by turning shoulder to anterior position. On the trip to the delivery room the membranes ruptured. Deep ether narcosis. In passing hand beyond fetal head to grasp the shoulder for rotation, a constriction ring was found like a collar around neck of the baby; this was quite easily dilated in about ten minutes with the assistance of Dr. Buford Hamilton. The shoulder was rotated to bring head to R. O. A., forceps were applied and living baby delivered. Second degree laceration repaired at once. Mother and babe made uncomplicated recovery. This case was the only one handled with reasonable ease, and the only living child in the series of six cases.

An hour-glass uterus may occur under four conditions:

- A. With constriction in front of entire fetus.
- B. With constriction around some portion of fetus.
- C. Following delivery of fetus and ahead of placenta.
- D. Following one twin and ahead of the second twin.

In my series the ring was about the neck of the fetus in every case. Dilatation, partial or complete, was effected manually, with two forceps deliveries and four versions. Maternal death rate nil. Fetal mortality, five of the six lost.

Perhaps cesarean delivery following dilatation sufficient to reduce the head backward through the ring might have cut down the fetal mortality, but it might through infection have increased the mothers' death rate. I am greatly in fear of cesareans after vaginal manipulations have been very extensive.

Cesarean might have been followed by hysterectomy to prevent infection, but this would have blasted the hopes for future babies in childless women; whereas, two of these cases have subsequently borne living children.

Another procedure with cesarean might have included the cutting of the ring to release that portion of the baby in front of the ring, but this might have resulted in rupture of the uterus, requiring hysterectomy.

Dickinson of Brooklyn says: "It is often possible to locate the contraction ring externally. . . . In abnormally severe labors, the difference in thickness between the contraction ring and the constantly thinning and elongating lower segment becomes palpable, and the boundary becomes visible as an obtuse angle under the belly-wall between the navel and the pubes. Before rupture of the membranes this diagnosis cannot be established by internal examination when the waters are large in amount. By vaginal examination only can the majority of instances be detected, and then the hand must be passed be-

yond the presenting part. . . . An unexplained impossibility to deliver will start a search that will locate the ring."

Mortality statistics do not lead to optimism. Of seventy-four cases in the literature, previous to Dickinson's series, there were fourteen maternal and thirty-nine fetal deaths. In Dickinson's series of seventeen cases he had no maternal deaths, but he also says that some of his cases were of the less tenacious blockades.

The best results must come from early diagnosis, surgical cleanliness, and good judgment as to the means employed for relief. My experience has shown very unhappy results for the child. Still I cannot agree with Dickinson and Jardine that version has a very limited use in these cases; however, my only living child was a forceps case and the ring in this case was easily dilated.

The maneuver to rotate the shoulder in persistent occiput-posterior positions described and practiced by Buford Hamilton might, if used, have saved some of the infants. He is very enthusiastic in his contention that it offers superior chances over version. It certainly deserves a place in obstetrics which has not been accorded in the literature.

Embryotomy will be permitted more often in these cases than in any other condition. Always must be remembered the possible rupture of the greatly thinned lower uterine segment during manipulations for dilating the ring, and from traction and attempts to rotate the body, and for versions.

CONCLUSIONS

- 1. Fetal mortality will be high under all circumstances.
- 2. Hour-glass uterus is most likely to appear in primipara.
- 3. Little danger to the mother results from manual dilatation and delivery, and other children may be borne without complication, two of my cases having given birth subsequently to living children, one in less than a year afterward.
- 4. The best results may be expected in early diagnosis.
- 5. Bandl's ring is not merely a muscular spasm, else it would relax under deep, prolonged anesthesia.
- 6. Cesarean section is the method of choice when the ring in front of the entire fetus.
- 7. The contraction ring usually occurs in prolonged labors with malpositions often, though the long labor may be the result of the ring rather than its cause.
- 8. An unexplained delay in delivery in normal position after reasonable lapse of time should lead to examination for the ring of Bandl.



## DISCUSSION

DR. B. G. HAMILTON, Kansas City: Dr. Wilhelm's paper is a timely paper and emphasizes a condition that is questioned by many obstetricians.

I have had fourteen cases, twelve of which were head and two breech presentations. In two head presentations the ring was preceding the head and in ten the ring was found around the neck. Each case had been in labor for several hours without progress, all having been posterior positions. In the two breech presentations pituitrin had been given from the time that progress ceased and when seen examination showed a ring around the babe at the popliteal region. Dilatation was easy in both cases and a live babe was delivered in each case.

As Dr. Wilhelm has said, the obstruction is not a part of the internal ring, but may be found anywhere from the internal ring to that part of the uterus where the peritoneum is reflected. It is found circular or in the form of the letter C, most often head presentation, as a band or collar around the neck. I recall a case at the City Hospital which was quite typical of both cases. The patient was in labor something like thirty-six hours when progress ceased. The fundus was broader and more tender than normal, and the lower uterine segment appeared to be cylindrical. Vaginal examination showed the cervix fully dilated, but there was no advancement with the pains, and when the hand was introduced into the vagina a distinct ring around the neck could be felt above the internal ring.

I think it will be found that the condition is more common in posterior position, especially where there has been a premature rupture of the bag of waters. Management of every case is of importance since treatment and prognosis are favored by early recognition. Lack of advancement after a few hours, especially with a fully dilated cervix, should first call one's attention to an obstruction. The gloved hand should be introduced into the vagina under strict asepsis and carried alongside the head in which case the ring if present is easily felt. The size of the ring depends on how long it has been present.

In most cases dilatation is necessary before delivery can be completed. It is best accomplished by introducing the gloved hand posterior to the presenting part up to the promontory, allowing the middle finger to rest on the promontory. By pressing downward with the index finger to the right and the ring and little finger to the left of the promontory, dilatation can most often be accomplished. The success of the procedure depends on tiring out of the muscular band.

The rotation of the babe is an easy procedure and seems to me to offer a safe treatment not only in these cases but in all posterior cases. The right shoulder is located with the right hand, rotation being directed to the left oblique diameter. If rotation can not be completed one may finish by using the left hand. The head is flexed and when necessary to use forceps pressure on the fundus will push the head well down in the pelvis. With the flexing of the head the suboccipito bregmatic diameter is brought into relation to the left oblique diameter. Forceps are then applied in relation to the ears, and traction is done along the approved lines, making delivery easy in the majority of cases. Especially is this so where there is no disproportion between the head and the pelvis.

The indication for cesarean section should be recognized before the onset of labor, and it is necessary to remember that the only indication for cesarean is disproportion between the size of the babe and that of the pelvis, in the absence of other complications.

In the majority of cases in which there has been a premature rupture of the bag of waters, the early introduction of the Voorhees bag should prevent this condition.

## SUPPURATION OF THE FRONTAL SINUS AND ITS COMPLICATIONS.\*

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Before going into the subject of suppurations of the frontal sinus, I think it would be advantageous to review briefly the anatomy and the anomalies of the sinus in order to refresh our memories. I will touch on the more important points of the frontal sinus and its variations so as to give you some idea of why suppurations are so difficult to cure.

The frontal sinuses are the farthest from the nasal cavities and are situated higher than any of the other accessory sinuses of the nose. As the name implies, they are situated in the frontal bone, are hollowed-out spaces in the vertical plate, are directly over the orbits, and have a septum between them, a sort of prolongation of the partition of the nose upward and backward. They are shaped somewhat like a ram's horn with the smaller end outward toward the external angular process and in large sinuses they may even extend to the external angular process. The large end, or sinus proper, is toward the middle line of the forehead just above the inner angle of the orbit with the supra-orbital ridge as a landmark. They have three walls, namely, the back or posterior wall, anterior wall, and floor. The floor and inner angle of the front wall are very thin, whereas the back wall is compact but not thick, and frequently the front or anterior wall, except at the inner third, is quite thick.

The shape of the sinus is such that with the effect of gravity in the standing position, the long narrow duct (nasofrontal), which leads from the inner end of this horn-like cavity to the cavity of the nose (middle meatus), allows free drainage in the normal so that frontal sinus disease, as a primary one, is not nearly so frequent as are others, especially affections of the ethmoids. The latter are narrow little cavities and are the centrally located group of cells or sinuses, so that they are more in a direct path for infections and also more apt to be infected from the other sinuses. The nasal frontal duct, in its pathway to the middle meatus, is very apt to become interfered with owing to the anatomical relationship of the bony framework of the middle of the nose. Especially is this true of the middle turbinal part of the ethmoid bone. The variations of the frontal, as to size, shape and number, are common.

I have found an absence of the frontal sinus several times by means of roentgen-ray photographs and also in cases where only one existed

\* Read before the Southeast Missouri Medical Association, May, 1919.

or where there was one very large sinus and a very small one, or both very small or very large. These large sinuses extended a great distance upward into the frontal bone and a considerable distance outward, sometimes to the external angular process. They are also more or less clover-leaf in shape. I have opened about 100 sinuses on the cadaver; on several occasions the frontal sinuses were absent, and a large anterior ethmoid cell, about one-half way between the ethmoid cell and the normal position of the frontal was found. In other words, the cells were two or three times larger than the ordinary anterior ethmoid cell and seem to have had their upward growth interfered with; as a consequence, there existed a sort of substitute sinus almost at the level of the frontonasal duct.

Sometimes (although I have never seen it) the frontal sinus on one side will be very large and overlap the other so that the right sinus is across the median line, or vice versa. The frontals being developed from the ethmoids and a part of the same, you would naturally expect all kinds of shapes, septa and dehiscences. No attempt at intranasal or extranasal frontal sinus surgery should be made without first having made a roentgen-ray photograph.

The mucosa of the frontal sinus is similar to that of the other sinus. It is thin and closely adheres to the periosteum; it is lined with ciliated epithelium, with the cilia waving toward the normal ostia. The blood-supply of the frontal is very rich, although no large vessels are encountered. The glandular elements are numerous but not nearly so extensive as those lining the nasal cavities.

My experiences shows that cases of severe suppuration of the frontal sinus are more difficult of cure and are more fraught with dangerous complications than severe suppuration of the other sinuses, notwithstanding the vital and important structures surrounding the sphenoidal sinus. While serious complications are far greater in chronic suppuration of the frontal they are by no means uncommon in acute suppurative conditions.

The etiology of suppurative conditions of the frontal is the same as that of suppurative conditions in the other accessory sinuses of the nose, but they are probably not so frequent. Most suppurative conditions of the frontal are the direct result of infections through the ethmoid labyrinth, and there is no question but that we do have suppurations of the frontal primarily and the ethmoid affected secondarily. Again, there is no question but that the sinuses, especially the frontal, are affected through the blood, as in syphilis and typhoid. It is not necessary to mention any particular disease as being the cause, but simply to state that any infection of the nose may invade the sinus and

frequently does; nevertheless through good natural drainage and good resistance the great majority get well with a little intranasal treatment.

Abnormalities of an anatomical nature within the nose are an important factor in the production of these infections since the normal drainage is interfered with. When these alterations occur in the osseous, turbinal, and in the mucous membrane tissues, there is generally present a chronic congestion of the mucous membrane, which naturally alters the physiology of the cellular and glandular elements. When the foregoing condition occurs the natural nasal immunity is changed; hence infections are more apt to arise.

Occasionally, in the acute conditions, infection is of a virulent nature, producing extensive suppuration and if not relieved promptly will spread to the surrounding tissues such as the orbit, producing phlegmon. When the infection produces necrosis of the posterior wall of the sinus, extradural abscess, abscess of the frontal lobes, and meningitis sometimes occurs, although rarely. In three of my cases there was necrosis of the posterior wall without any intracranial involvement.

Again, the infection may travel through the venous channels of the diploe of the frontal bone, producing osteomyelitis. These same complications are not of infrequent occurrence in those chronic cases in which there is occlusion of the nasofrontal duct, due to the thickening of the mucosa, polypi and granulations, or narrowing of the bony duct from the hyperplasia.

The pathology of suppuration of the frontal sinus is the same both in acute and chronic cases, except one of degree and duration. At first, we unquestionably have a catarrhal inflammation followed immediately by suppuration. The mucosa shows congestion and thickening with a purulent exudate. If the process is of a virulent type, you have added ulcerations, caries and necrosis, or thrombophlebitis. In rare cases, the infection is so virulent and spreads so rapidly, that part or all of the frontal bone is involved with caries and destruction, sometimes with localized abscesses and sequestra. The latter condition occurred in two of the author's cases.

#### SYMPTOMS

The symptoms of suppuration of the frontal sinuses are in a great measure the same in acute as in the chronic condition where, in the latter, the drainage is suddenly interfered with. It is only in those cases of chronic suppuration, which we might term "silent cases" and in which the symptoms are few and often unnoticed, that the diagnosis is difficult. It is in these silent cases with an acute exacerbation that the symptomatology takes on that of the acute form and,



as a result, a mistaken diagnosis is made, which makes quite a difference in the outcome of the case in regard to the surgical treatment. Naturally, we may classify the symptoms of acute and chronic suppuration of the frontal sinus into two groups: (1) Those of a fulminating character, which occur in acute cases, and in chronic suppurative sinusitis with a flare-up; (2) instances of chronic suppuration in which the symptoms are of the so-called silent type.

In these silent type cases, the main symptom is a unilateral discharge of pus. This is most frequently found in the middle meatus to the outer side of the middle turbinal. Accompanying this condition, you may frequently have polypi growing from the middle turbinal or the ethmoidal cells. Of course when these polypi develop there is naturally added to the symptoms the complication resulting from stenosis—occlusion—which in consequence interferes to a certain degree with olfaction. Frequently we find these patients complaining of ache along the middle of the nose which is due to hyperplasia and thickening of the middle turbinal and ethmoidal cells. Pain and tenderness, which are such prominent symptoms in the other types, are generally absent and when they do occur they are in the form of a variable dull ache or ocular pain that frequently sends the patient to the oculist instead of to the rhinologist.

In the symptomatology of the other classes of cases, i. e., fulminating or explosive type, whether acute or chronic, the most pronounced diagnostic symptoms are pain over the region of the sinus and headaches with a history of infection and unilateral discharge. The pain varies according to the extent, duration and severity of the infection. It may be of a neuralgic type similar to that frequently seen in mild acute cases, or a severe, throbbing, excruciating pain with a full feeling over the sinus and a generalized headache. The pain over the frontal sinus is made worse in certain movements, such as stooping, coughing, lifting, etc. Pain on pressure at the inner angle of the orbit is always pathognomonic in sinus disease, but here one must not forget this same symptom is found in all of the milder cases following colds, etc., and is frequently confounded with the pain of a neuritis of the supra-orbital nerve. By careful examination, one can differentiate the pain resulting from neuritis from that of the sinus, particularly by its anatomical location.

Elevation of temperature is frequently seen and, in some cases, resembles mild typhoid or remittent fever. In one case seen in consultation in which I later operated, the temperature, according to the physician, ranged from 100 to 103 degrees F. for about three weeks, with severe prostration and emaciation. Of course the Widal reaction and plasmodium examination

would determine the diagnosis. Discharge of pus from the nose on the same side of the head as that in which the pain and tenderness are, would be indicative of suppuration of the frontal sinus. I might mention here that in some suppurative conditions of the antrum the pain is referred to the supra-orbital region but in that case you would not find the pain and tenderness over the inner angle of the orbit.

Edema of the upper eyelid is frequently seen and mechanical ptosis is found in severe cases. Occasionally you will find diplopia as a symptom. Inflammation of the superciliary region, frequently with edema extending over the entire forehead and with frontal cellular abscesses with or without caries and necrosis of the bone, is also encountered in virulent cases. This was seen by me in two cases. Sometimes we find a fistula in the skin, which opening is in some cases some distance from the one in the anterior wall. This is not so rare as some authors think, as I have seen it in several cases. Among the general symptoms there are indisposition, indigestion, poor appetite, constipation, loss of weight, etc.

#### DIAGNOSIS

The diagnosis of suppuration of the frontal sinus is, as a rule, not very difficult. It is well to get a good history of the case since from this one can get a fair idea as to the main symptoms and the length of time the disease has existed. On examination of the nasal cavity one nearly always finds pus in the middle meatus and between the middle turbinal and outer wall of the nose. Should polypi exist it is strong evidence of disease in the anterior group of sinuses. As I have said previously, the anterior ethmoids and the frontal are very frequently affected at the same time; hence all that would be necessary to eliminate the antrum would be a puncture of the inner wall and washing out of the same. If the water should come away clear then one can eliminate the antrum. The middle turbinal is always boggy, edematous, and crowds the middle meatus. When the history shows that the condition has existed for several months we know that the disease is to be considered a chronic one. A fistula leading into the frontal bone would be positive evidence of frontal suppuration.

The symptoms of headaches, neuralgia, and pain over region of the sinus are frequent. Should there be added to these symptoms, acute exophthalmos, fixation of the eyeball, edema of eyelid, one knows that he is dealing with an extension of the infection into the orbit. Of course these same complications may occur from any of the sinuses on that side; hence in those cases which are difficult of diagnosis, opening up of the sinuses is required in order

to determine which sinus is the cause of the trouble. Sometimes one will find that all the sinuses are infected with the frontal sinus perhaps as a primary cause and the infection spreading from the frontal to the other sinuses. If one finds edema of the forehead and a circumscribed abscess plus the other symptoms, including intranasal symptoms, one can almost to a certainty, diagnose frontal suppuration with extension into the surrounding tissue. This occurred in a few cases in my experience. The roentgen ray and transillumination I do not rely on for diagnosis and I have practically given up the matter. A roentgen-ray photograph should be made in all cases so that one may form some idea of the size, shape, etc., of the sinuses, and this should be made not only of the frontal sinus but of all sinuses.

#### PROGNOSIS AND TREATMENT OF SUPPURATION OF THE FRONTAL SINUS

In acute suppurative cases, with appropriate treatment a cure can be brought about in 90 per cent. of the milder cases. Shrinkage of the middle turbinal by application of argyrol, iodine, astringents, etc., is all that is necessary. Resection of part of the middle turbinal, leaving as much posteriorly as the operator deems necessary with thorough breaking up and cleaning out of the ethmoidal cells and enlarging the nasofrontal duct with rasps, etc., is the method of cure of most cases when the above treatment fails.

With good ventilation and drainage established I feel that it is seldom necessary to wash out the sinus and I have not practiced this method for many years. In the silent type of chronic suppuration the intranasal surgery previously mentioned plus suction will cure most cases entirely after prolonged treatment. In the intractable cases in which intranasal surgery and treatment have been carried out for a considerable time and in those cases of the so-called explosive or fulminating type, external operations are necessary.

Of course it goes without saying that in the fulminating types which occur in some of the acute suppurating frontal cases and also in the chronic ones, the intranasal work should be done at the same time as the external operation (if not already done), either through the external wound or intranasally. Of the external or radical operations, there are several methods of operation which bring about a cure in a great majority of cases. Of the three operations which give the best results I will mention the Lothrop, the Killian, and a modified Kundt operation. The operation of choice would depend, as a rule, on the size of the sinus and complications which exist at the time. As a general rule, when external operation is neces-

sary, the object is to destroy all diseased tissue, whether it be bone or mucous membrane so as to establish ample ventilation and drainage.

In regard to the Killian operation, I would not advise it in the majority of cases owing to the disfigurement and also on account of mortality. The Lothrop operation is unquestionably based on sound surgical principles and should be the operation of choice in many cases. The modified Kundt operation has given me good results in cases in which the sinus was small, by obliterating it, but the one disadvantage is the prolonged treatment. The modified Killian operation, which I performed some ten years ago (and as far as I am aware is original), was done with the idea of lessening the deformity in those very large sinuses where it is impossible to obliterate them by any operation. This method can also be used in the Lothrop operation in those cases of a very large sinus, in which the anterior wall is healthy. The treatment of orbital abscesses, scalp abscesses, sequestra, ostia myelitis, etc., when found should be attacked radically in order to save the eye or life of the patient, and should be along the lines of rational surgery.

In order to classify these different external operations, I will give a description with a few personal remarks about them. The idea of all operations on the frontal is to bring about a cure. In order to do this we must eradicate the disease, either by methods of operating which obliterate the sinus or, as mentioned previously, by greatly enlarging the natural opening (frontal nasal duct after removing all diseased tissue).

The Kundt and Killian operations are of the obliterating type while the Lothrop operation is by increased drainage of the natural opening and removing the ethmoidal cells.

#### KILLIAN OPERATION—THE ACCESSORY SINUSES OF THE NOSE

*Technic.*—After all polyps and hypertrophies dependent on the sinus suppuration have been removed from the nose and the size of the sinus ascertained by skiagraphy, a general anesthetic is given.

The nasal cavity of the affected side is plugged with four cotton tampons, about the size of a cigar, attached to threads. The first one is placed on the nasal floor, the second in the middle nasal fossa, the third in the olfactory fissure, while the fourth is packed firmly along the internal bridge of the nose between the ascending process of the maxillary bone and the septum. This tampon supports the mucosa and prevents injury during the resection of the bone. After the usual cleaning, the head being steadied, an incision, beginning at the temporal end of the eyebrow, is made inward through



its middle to the nasal end, where it passes downward in a graceful curve along the side of the nose to the base of the nasal bone. A gauze pad covers the eye. Several cross incisions are made in order to be able to approximate the wound accurately.

Hemorrhage is arrested by hemostats, which are allowed to remain in place. The edges of the wound are retracted. The first periosteal incision is made at the temporal end of the original incision, 6 to 8 mm. above, and parallel to the supra-orbital margin. The second incision is slightly internal to the supra-orbital notch, extending downward through the center of the ascending process of the superior maxillary. The periosteum covering the frontal sinus above the bridge is elevated and retracted. A groove is made in the bone with a hammer and V-shaped chisel, following the curve of the orbital margin until the sinus is penetrated. The lower surface of this groove forms the upper edge of the supra-orbital bridge.

The entire anterior wall lying above the bridge is removed with bone forceps, or with chisel and mallet. After complete removal of the anterior wall, the mucous membrane, together with partial septa, is thoroughly curetted, special care being given to all recesses and hollows; the bridge is smoothed off and the sinus loosely packed with gauze. The resection of the ascending process of the maxillary bone is now undertaken, first elevating the periosteum from the frontal process, lachrymal fossa and orbital portion of frontal bone almost to the supra-orbital notch.

A groove is cut through the suture formed by the nasal bone and frontal process in an upward direction by means of the curved V-shaped chisel. Another groove is made through the frontal process at right angles to the preceding, care being taken not to injure the lachrymal sac or the underlying nasal mucosa. When necessary, a third groove is made through the nasofrontal suture, forming the lower edge of the bridge. This is important since otherwise the bridge could easily be destroyed in prying out the resected portion of the ascending maxillary process.

A small opening is made at the junction of these grooves and the bone removed piecemeal, so as not to lacerate the nasal mucosa which is to form the flap leading into the frontal sinus. The extent of bone removed is governed by the size of the sinus, since it should extend well into the floor. The limits for the resection and elevation are: Below, lower part of lachrymal groove; behind, anterior ethmoidal vessels; above, trochlear attachment, supra-orbital notch. After the orbital tissues are retracted the ethmoid cells may be removed to the anterior wall of sphenoid.

Reflected light will be necessary for this purpose. The resection of the nasal mucosa beneath the resected frontal process, turning it into the sinus, completes the operation. The wound is flushed out with normal salt solution, iodoform is insufflated, and the edges are approximated with aluminum-bronze sutures. A gauze strip in the nose, which extends upward, holds the flap of the mucosa in position. This strip is removed on the second day and the sutures on the fifth.

#### LOTHROP OPERATION

The front of the middle turbinate has been removed and many anterior ethmoid cells broken through. Roentgen-ray findings should have been carefully studied. Application of a 4 per cent. solution of cocain and adrenalin ( $\frac{1}{2000}$ ) to the extreme upper front portion of the nasal cavity will lessen materially the amount of hemorrhage. The usual bone cutting instruments and slender curets should be selected, but the essential portion of the operation is performed solely by means of burr drills of selected sizes mounted on curved and straight shanks. The burr drills devised by Tilley and Ballinger for antrum operations serve our purpose well, particularly those with the curved shank.

The patient is placed in a sitting posture and the head kept horizontal most of the time. There is less shock when the patient is placed in a semirecumbent position, but when this position is selected, greater caution is needed to keep in mind the anatomic relations and hemorrhage may be more troublesome. In order to avoid the annoyance of blood escaping into the pharynx, the posterior nares may be plugged or, better still, narrow strips of gauze may be introduced via the anterior nares, leaving the front half of the nasal fossa free for operation. Ether should be administered through a tube entering the mouth to the pharynx, so as to avoid any delay or annoyance from this source.

The incision in the middle portion is the one used in the Killian operation and in fact the one adopted for most of the frontal sinus operations. It extends from about the center of the unshaven eyebrow inward and then downward a short distance on the outer side of the nose. The supra-orbital nerve may be spared in some cases. An area of bone at the base of the nasal process and nasal bone and above is exposed and denuded of periosteum. The sinus should be entered just above the base of the nasal process; this is easily accomplished by means of small chisels and gouges, and enlarged by rongeur forceps. The sinus is then explored by means of a small probe. The ostium will be found situated toward the posterior angle. Pass the probe down into the nose and out the anterior nares. The upper end should protrude through the wound and be bent so that the probe

will stay in place of itself. Pass small curets from above down through the floor of the sinus, always in front of and external to the probe at the ostium. Thus, the thin walls of the anterior cells are broken up until the ostium becomes considerably enlarged. During these manipulations or earlier, the walls of the sinus should be freed from excessive granulation tissue or polyps, if such be present. If the mucous membrane of the sinus is not materially hypertrophied, it is probably better not to curet it, since we obtain a better chance for resolution after the lower obstruction is removed. However, if there is much hypertrophy, ulceration, etc., the thickened portion should be curetted, but the periosteum of the lining of the sinus should not be removed. If distal portions of the sinus are already practically obliterated by dense scar tissue, do not disturb them.

The object of this minimum of curetting is to impair as little as possible the nutrition of the bony walls of the sinus and thus avoid subsequent necrosis. After a short time the sinus hemorrhage will be practically arrested and the vicinity of the ostium can be inspected. Almost all of the subsequent work is performed by the burr drills, introduced principally through the nose, so as to keep the burr almost always in sight. These instruments are to be used just as a dentist reams out the carious portion of a tooth. No other instrument can be used for this purpose, because the part to be removed is otherwise inaccessible, and the use of chisels and rongeurs would be dangerous and inexact. The burr gnaws away the bone with precision and safety. At first the smaller burrs are introduced through the anterior nares to the region of the guiding probe. First, the nasal crest is removed and the procedure continued anteriorly toward the nasal bone and nasal process at about their upper suture line. As the opening becomes larger, the larger burrs can be used. By this means this portion of the nasal bone and the nasal process of the maxilla, together with the adjacent part of the frontal bone, become very thin and there remains only a bony shell around the circumference of the enlarged ostium. It is surprising how large an opening can thus be obtained. By means of the burr drill and a curet, the ethmoid cells which may be present at the upper end of the infundibulum and opposite the lachrymal bone, and the agger nasi should be destroyed. While working opposite the lachrymal bone, the finger should be pressed gently in the inner canthus to serve as a guide and for protection. The lachrymal bone and the external surfaces of the ends of the nasal bone and nasal process should not be broken through since these thin shells will serve to keep the region of the ostium from sinking in. This, I believe, is the usual cause for failure

in the modern radical operation where this portion of the wall has been destroyed.

Recent cases operated on have demonstrated the wisdom of making use of the combined nasal floor of both sinuses, even though only one sinus is pathologic, in the manner described below for operation in cases in which both sinuses are involved. The mucous membrane of the healthy sinus does not become diseased and the proximity of healthy mucous membrane favors early epidermization. Furthermore, the single opening in the facial wall gives ample opportunity for the complete operation, because we do not care to reach the distal portions of the normal sinus. A large part of the interfrontal septum is removed, and, if desired, the healthy sinus can readily be probed and curetted.

If both sinuses are involved, the opportunity for a large opening is most excellent. The roentgen-ray findings have already shown the topography of the sinus and, in particular, the distance between the crista galli region and the anterior contour of the sinus, and also the extent of the interfrontal septum. The opposite sinus may be opened and its ostium enlarged in the manner previously described; after which, the septum is perforated in its thin, central portion, and its anterior and lower portion enlarged with the burr gradually approaching the floor of the sinus. We are now at the base of the bridge of the nose, behind which is much dense bone in the vicinity of the median line, where the septum of the sinuses and that of the nose meet. This can be removed readily with the burr in view, leaving a thin protecting shell of bone in front. The portion of the septum of nose, just below the sinuses, should be removed also with the burr. This is made up of the perpendicular plate of the ethmoid and is to be removed for a depth of nearly 1 inch. Similar to any sinus operation the posterior angle of the sinus and the region of the front end of the cribriform plate should be avoided at all times. It is surprising to observe in the average sinus how much space for drainage can thus be obtained. From below, a comparatively large instrument can be swept across from one sinus to the other and from either nostril into either sinus. The removal of this median partition adds so much more to the efficiency of the drainage that I believe it should be done even in cases where only one sinus is involved. It may at first thought seem an unwise step but I believe it will work for good and not harm in every instance. A sinus is opened frequently for exploration and generally without ill effect, but if any harm does follow it is because of an accumulated blood-clot which cannot escape and which becomes infected. In these cases where the opposite side is opened there is no chance for retention and the healthy mucous



membrane does not become infected and pus is not retained. This is on the same principle that an antrum may act simply as a reservoir in frontal sinus suppuration and give no further trouble after the latter is cured. Furthermore, the chance for drainage is poor compared with that of the frontal sinus treated as previously described. Besides obtaining a very large opening, another advantage of connecting the sinuses is the fact that the mucous membrane of the healthy side allows epidermization in the vicinity of the new ostium on the diseased side. In skilled hands the whole operation can be accomplished through a single external opening, although a double opening is safer.

By the time the operation is completed the hemorrhage has practically ceased. With the head tipped forward, the external wound should be washed with a sterile solution and the skin incision closed. The tampons are to be removed from the nose and a compress bandage applied. The after-treatment is the same as in any case. Irrigation should be avoided for several days. As the intranasal areas begin to granulate around the ostium, they should be kept clean and smooth by the usual methods. The whole sinus cavity is now particularly accessible for treatment.

While I have not had much experience with the Lothrop operation, as stated before, it is based on sound surgical principles where good drainage is needed; nevertheless, there are several objections to the method. First, the author states that in very skilled hands both nasofrontal ducts can be enlarged through the one opening in the anterior or facial wall of the sinus after finishing the work on one nasofrontal duct and surrounding bony tissues, and after removing a good part of the perpendicular plate of the ethmoid, but states at another time it would be better to open both sinuses even if the other one is healthy.

Personally, I can see no reason for opening the other sinus, if healthy, and I also do not think it necessary to remove any of the septum or to enlarge the other nasofrontal duct. Of course should the septum be deviated in the region, then one would have an excuse for operating on the septum. While I will admit that working within the nose with a guide in the nasofrontal duct is safer, I think that better work can be accomplished by using both routes with the different lengths and sizes of burrs. When working from above one should be careful and not cut backward or inward; but by having the opening of the duct always in view and using fine fissure burrs I do not think there is any danger.

If one finds necrosis of the floor and anterior wall, or a fistula, I would not advocate Lothrop's operation, but I would use the Kundt operation if the sinus was small, or a Killian in a fairly

large sinus. If the sinus is one of enormous size, and in case it is impossible to obliterate it entirely to save disfigurement I would advocate a method I have devised; that is, a Killian complete except that I would leave a good strip of bone covered by periosteum, about midway between the supra-orbital ridge and the uppermost wall of the facial or anterior wall, and remove only one-fourth of the floor of the sinus towards the internal and lower angle. Of course, should there be caries of the floor or walls anywhere it must be looked after.

The Kundt operation is (as stated previously) used in small sinuses and is performed by removing the entire anterior wall and removing the mucous membrane of the frontonasal duct, blocking off the duct from the nasal cavity and packing the open wound for several weeks until the sinus is obliterated.

In this operation better results are obtained by removing the middle turbinal and curetting away the ethmoidal cells; this should always be done first. After all is said, the kind of operation to be performed depends a good deal on the condition of the interior of the diseased sinus; also on the size of the sinus, whether fistula is present, and the physical condition of the patient. A cure is not always obtained regardless of what kind of operation is performed.

219 Metropolitan Building.

#### NEUORETINITIS (CHOKED DISK) SEQUEL TO THYROID EXTIRPATION \*

J. W. SHERER, M.D.  
KANSAS CITY, MO.

The following observation is unique in an experience of twenty-four years:

Mrs. A. Z., aged 32, consulted me on Sept. 25, 1918, at the suggestion of her physician, for sudden blindness of the left eye which had developed five days before.

She gave a history of asthenopic symptoms over a period of at least five months, consisting of eye fatigue and aching and headache in the frontal and occipital regions. She had been doing much knitting for the soldiers and this had tired her eyes more than usual. She had never worn glasses. She had suffered severely from exophthalmic goiter five years previously with pronounced exophthalmus and cardiac and nervous symptoms in the way of tachycardia and general nervousness. The thyroid gland was skilfully removed five years ago and the patient experienced relief from all these symptoms, including the exophthalmus which had entirely disappeared. For the last two months the left eye has again become exophthalmic and there is severe pain on the left side of the head.

The left eyeball is excessively prominent and bulging and the lids, both upper and lower, are somewhat swollen. There is no perception of light whatever in the left eye, the visual field being extinct. The pupil

\* Read at the Sixty-Third Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.

is partially dilated and does not react to light falling on the left eye but does show a consensual reaction to light falling on the right eye.

The ophthalmoscopic examination of the right eye was negative but in the left eye a striking picture was revealed. The media were clear and the semidilated pupil permitted a free view of the fundus. A classic condition of choked disk was present. The outlines of the disk were obliterated. The swelling in this region amounted to about three diopters. The veins were greatly distended and very tortuous and at several places distinctly corkscrew shapes were perceptible. The arteries were small and pale. There were no hemorrhages. The patient was nervous and emotional.

The ocular tension was normal in both eyes. Laboratory tests as to urinalysis and Wassermann were negative. Measurements of the refraction under atropin showed  $+2.00s + 25c$ , 90a.  $V = 100$  per cent. in the right eye and  $+3.00s + 75c$ , 90a ascertained with the skiascope for the left eye with no vision.

This was the sum total of the findings. Although there was marked exophthalmus of the left eye none of the classic signs of goiter were present, such as Graefe, Möbius, Dalrymple and Stellwag.

Neither tachycardia nor struma was present, but the patient was unmistakably in a highly nervous and emotional state. She was placed in a hospital on a restricted diet and medication consisting of bromides and alternatives, the latter being very small doses of bichlorid and iodid. In addition, profuse perspirations were induced by injection hypodermatically of one-sixth grain of pilocarpin at bedtime and repeated at intervals of three days at first, and at intervals of four and five days as recovery progressed. Within three days some light could be perceived by the blind eye and this gradually became brighter and more distinct. Then moving objects could be seen; at first photographic vision only was present then some faint perception of color occurred. A faint blue tint was first noticeable and gradually, one by one, came yellow, red and green. It was nearly two months before the color sense became normal and by that time all other symptoms had vanished too. The patient recovered from her extremely nervous condition. Visual acuity gradually approximated 100 per cent. with her optical correction. The exophthalmus entirely disappeared.

The fundal condition of choked disk or neuroretinitis slowly but steadily subsided. The swelling in the course of six weeks entirely disappeared and in about two months the congested veins showed no distension that was recognizable.

I believe the condition was one of imperfect elimination of the products of metabolic change and owing to the exophthalmus the conclusion that this was connected with the thyroid condition is logical.

1232 Rialto Building.

#### DISCUSSION

DR. F. E. WOODRUFF, St. Louis: Extirpation of the thyroid is an operation that is to be done only because of the gravest disturbances and urgent symptoms. Partial removal has been done and is being done for less serious conditions and with good results. Whether the removal of the gland in part or in toto is undertaken it may be followed by the gravest consequences. The gland and its secretions are necessary in the human economy and the total removal is generally followed by death. The eye complications are as a rule rather negligible. There are, however, cases reported of choked disc following thyroidectomy. Kraus

of Philadelphia reports visual disturbance immediately following thyroidectomy and a swelling of the nerve which reached its maximum about three months after the operation. Later there was a contraction of the form field and a crossing of the red field. The blood examination was negative. The subsidence of the neuroretinitis was followed by a low grade of nerve atrophy with a moderate degree of cutting of the form fields. Thyroid extract aggravated the symptoms and was withdrawn.

Keogh of Chicago reported a removal of the thyroid in two operations, the latter of which was followed by partial blindness. This case was marked by an atrophy of the optic nerve and contraction of the field of vision and the form field for color.

Hyperthyroid symptoms are often greatly aggravated by operation. This has been attributed to overwhelming of the organism with toxic products squeezed from the thyroid by manipulation incident to its removal. The doctor is to be congratulated on his diagnosis and the complete recovery of his patient.

I feel, however, that with a history of neuroretinitis and recovery following the administration of mercury and the iodid of potash that I would be inclined to consider lues as a possible causative factor. The fact that there was a negative Wassermann in the case does not exclude syphilis.

DR. E. H. HIGBEE, St. Louis: Owing to the fact that Dr. Sherer's case had a tumor and optic neuritis (choked disk) on one side only I do not think this was a case of exophthalmic goiter.

A negative Wassermann does not mean that the patient does not have syphilis. The fact that the patient was highly nervous can easily be explained in that she realized that she had a serious eye trouble and had previously suffered from exophthalmic goiter.

The quick recovery from such severe symptoms under iodid of potash and diaphoresis give me the opinion that this was not a sequel of thyroid trouble, but was a gumma of the orbit.

DR. J. W. SHERER, closing: Dr. Woodruff has hit the nail on the head in going into the details of the physiology of the thyroid gland. This was one manifestation of a disturbed thyroid gland. We know that the exophthalmos frequently occurs on one side only. I did not go into the details of the physiology in the paper as I simply wanted to outline the case. I very rarely have encountered any case that has so amply repaid study as this one has. I am glad the doctor mentioned syphilis. That was taken up and eliminated. The patient did not have any treatment that could have cured her if this had been a neuritis of syphilitic origin. She had  $\frac{1}{100}$  bichlorid of mercury three times a day for the first week only. She got 5 grains of iodid of potash three times a day for three weeks. She got bromids for nervousness and sweats, regulation of diet, and rest in bed. The inflammatory process in the optic nerve subsided and she continued to improve steadily.

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#### DR. GARVIN DECORATED FOR SERVICES IN FRANCE

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Major Albert H. Garvin, chief of the Bureau of Tuberculosis, Medical and Surgical Department, with the American Red Cross forces in France, has been decorated with the *Medaille d'Honneur de Vermeil* of the French government in recognition of his services to that country. Major Garvin, who went to France in September, 1917, was superintendent of the New York State Hospital for Tuberculosis for ten years. He returned to America late in June.





NIMROD P. WOOD, M.D.  
President Missouri State Medical Association, 1919-1920

# THE JOURNAL

OF THE

## Missouri State Medical Association

SEPTEMBER, 1919

### EDITORIALS

#### THE MENTAL HYGIENE SURVEY

The very importance of mental hygiene leads us to further comment on the subject. As announced in these columns previously, a survey of the state will be begun in the near future to determine the status of care of those with mental disease and mental deficiency. The magnitude of this undertaking is appreciated only by a comparatively few physicians who have because of personal interest or fortuitous chance been brought into contact with this phase of medical practice. To what extent mental disease and mental deficiency is prevalent in Missouri no one knows. To be sure, anyone can easily ascertain the number of persons confined in our state institutions, but this knowledge is of no assistance in determining how many such mental invalids are living at large in the state outside of the institutions, how many are in the penitentiary, the almshouses, etc. That information can be obtained only by a state-wide investigation carried on by a competent and trained personnel. Such an investigation is accomplished by a survey. It is obvious that until the problem is fully known and adequately stated its solution is impossible. Until we know what the present status of care for the insane and mentally deficient in this state is, betterment of such conditions cannot be secured. In as much as a survey of this state is to be made in the near future it is desirable that the profession be acquainted with the scope of activities.

What is a survey and what does it include? Such a survey as is contemplated will consider first, the question of state care of the insane. Here will come general consideration of the legal basis of state care, the history and present status of state care and the economics of state care, that is, the financial resources of the state, methods of taxation and revenue, provisions for new institutions and for maintenance of present ones by bond issue, direct appropriations, contributions by towns and counties, reimbursement by paying patients, and the like. Next will be the consideration of state and local administration, supervision and inspection with investigation of administrative and supervisory agencies, fiscal control and miscellaneous functions, such as the transfer of patients, deportation of aliens and the super-

vision of insane in private institutions, jails, almshouses, etc. Then would come a special examination of state institutions for the insane, including an investigation of the physical fitness of the plant, its state of repair, water supply, ventilation, fire protection, arrangement, construction, cleanliness, dining rooms, wards, kitchens, storerooms, refrigeration, shops, amusement hall, morgue, etc.; the medical work, staff, staff meetings, clinical records, necropsies, medical library, use of clinical material for medical instruction, special features of treatment, receiving service, hydrotherapy, electrotherapy, death rate, suicides, provision for special groups of patients, acute and chronic cases, tuberculous, convalescents, disturbed, epileptic, etc.; parole and discharge with provision for after care; occupation, diversion and visiting; nurses and attendants, training school, etc. The second main problem would be the investigation into the matter of commitment, discharge and parole, considering the legal basis of commitment, the care of criminal cases and after care. The third main object would be the investigation of treatment, care and detention out of state institutions embracing private institutions, almshouses, jails and other places; care in psychopathic hospitals, psychopathic wards in general hospitals, dispensaries and clinics. Fourth would come the consideration of social service in mental cases, and fifth, the matter of teaching psychiatry in the medical schools. And finally, on the basis of the information so obtained, would come the formation of state policies concerning the finances of state care of the insane; administration, supervision and inspection, commitment laws, care of the insane out of state institutions, etc.

From the foregoing outline an understanding of the meaning of a survey may be obtained. It means not only an investigation of our institutions for the insane and feeble-minded, but a thorough study of all of this class of dependents wherever they may be found in the state. Not only their number but the manner of their care, their physical well-being and surroundings as well as their medical care and treatment both while in the institution and after they are discharged or paroled. The economic side of the question of immediate interest to the taxpayers will receive careful attention. Prevention of mental disease is aimed at by an investigation of our medical schools to determine what instruction in psychiatry is being given our medical students. In short, every angle of the whole situation will be turned out and at the conclusion definite advice and suggestion will be given as to the measures to be employed for betterment.

During the survey, which will occupy fully one year, propaganda for popular education will be carried on throughout the state and thus the soil prepared for a ready acceptance of reform



on the part of the public. In all of this the medical profession must take a leading part and stand by with every assistance, and the members of this Association can go far in leading public opinion along the path of improvement to better mental health in Missouri. It should be remembered that all of this good is made possible without expense to the commonwealth of Missouri by the invitation extended by Governor Gardner and accepted by the National Committee for Mental Hygiene to carry on this survey in a most thorough and depth-reaching manner.

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#### NIMROD P. WOOD, M.D.

The election of Dr. N. P. Wood to the presidency of our Association is a worthy recognition of his untiring service in upbuilding the Association and broadening the scope of its usefulness. He is well chosen for this office and his elevation to the highest honor in our gift will be approved by every member. We may rest assured that under his supervision the affairs of the Association will be conducted in a high-minded manner for the best interests of the entire profession.

Dr. Wood was born and reared in Jackson County, receiving his preliminary education in the public schools, the Bryant Business College and Lincoln College. He was graduated by the St. Louis Medical College, now Washington University, in 1881, and for seventeen years he practiced at Blue Springs; he then moved to Independence where he has since lived. Early in his professional career he associated himself with his confrères in his district and became a member of the Jackson County Medical Society and the Kansas City District Medical Society. In both these organizations as well as in the State Medical Association in the years previous to its reorganization he was an active worker and was elected president of the Kansas City District Medical Society in 1889, while Jackson County Medical Society honored him with its presidency in 1914. He has been a teacher of medicine for many years and filled the chair of Principles and Practice of Medicine in the Medico-Chirurgical College of Kansas City, which was the successor of the Kansas City (Kansas) College of Medicine and Surgery. When the University of Kansas absorbed the Medico-Chirurgical College in 1905 to form the school of medicine of the University of Kansas, Dr. Wood was appointed Associate Professor of Internal Medicine in the consolidated school and held that position for ten years.

Dr. Wood has served the Association in many capacities since the reorganization and his unusual talent as a forceful and entertaining speaker has frequently drawn invitations from

county societies to address them on some practical subject and speak before lay audiences on public health topics. In this year of reconstruction he will undoubtedly receive many invitations to visit county societies and assist in their activities toward the accomplishment of the high purposes that form the basis of our organization.

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#### ST. LOUIS CLINICS

With the conclusion of the world war there has come at least one benefit out of the multitude of hardships. The public at large has been brought face to face with the necessity of considering its resources, the compulsion to economize at every angle and to obtain the full value of each item of life. Reconstruction, rehabilitation, training, have become the watchwords of the day. The waste of material in the past has been unlimited. It took such a war as we have passed through, and from which we are far from a state of recovery today, to push home the well known fact that we are a wasteful people. This country has not been accustomed to figure material in terms of worth of human existence—man power. Again, it has taken a world war to drive this point home. The value of health has not been underestimated only; it has not been considered. The losses accruing to this nation from ill health, sickness, have never been adequately evaluated. The value of health as opposed to the value of steel, of brick, of lumber, has not been compared. As a result, what do we find? Health neglected, disease taken as a matter of course, something inevitable, natural wear and tear. Now that the realization has come that human health has an economic value, what profit will there come? How will this knowledge be made of use and accessible to the public at large? It cannot be gainsaid that the paramount duty of the medical profession is to protect the health of the community. In order to do this the medical profession must be brought into contact with the knowledge of disease and its prevention—must keep itself abreast of the times medically.

As there are centers of industry so also are there centers of medicine. A large clinical material is essential to research and research is the *sine qua non* of advancement. Where people accumulate there likewise accumulates clinical material in our large cities. Such material should be made valuable and accessible to all practitioners of medicine throughout the neighboring communities. Such a clearing house of instruction and mutual assistance is the purpose and intention of the St. Louis Clinics, organized and conducted by the clinical section of the St. Louis Medical Society. Clinics conducted by this section, embracing all branches of medicine and including all the specialties, will be

open to the profession at large in order that the immense clinical material of a city will be of value to all and not limited to a few. Whether a physician desires to spend a while in medicine or wishes to take in one or more of the specialties the clinics offer the opportunity. Schedules will be announced in the JOURNAL so that the physician may arrange to spend his time to his greatest advantage as he wills.

It is hoped the profession will cooperate with this attempt to increase the efficiency of its medical work and thereby increase the success of this undertaking.

### PROHIBITION AND DRUG ADDICTIONS

There has been considerable apprehensive speculation, not without some reasonable foundation perhaps, concerning the effect of prohibition on the prevalence of drug addictions. It has been rather generally thought that instances of drug addiction would increase in frequency as a result of nation-wide prohibition. Such a presumption must have its fundamental basis in the belief, in many cases correct, that the alcoholic is such because of an underlying mental instability; that he or she is a mental deviate with a constitutionally inferior or psychopathic type of mental mechanism. Such deviation from normal (sic) mental make-up only indirectly leads to alcoholism however. The decreased volitional control and emotional instability, so marked in individuals of this psychic group, is directly provocative of conflict complexes which in their turn find release or outlet by replacement with more comfortable, perhaps less critical, mental attitudes induced by the exhibition of pharmacological effects. Such an effect is produced by alcohol. Repetition of usage to secure this effect once learned leads to an habituation which becomes a more prominent pathological factor than the original mental obliquity for which it was taken as a relief; indeed, to such an extent that the original mental state as a cause may be entirely obscured by the confirmed and evident alcoholism with its train of secondary signs and symptoms.

Mind is the adaptive mechanism by which man fits himself into his environmental niche. Then a want of such proper fitting indicates disturbance of mind, which constitutes mental disorder in the medical sense and not infrequently in the legal sense (insanity). Alcohol is one of a group of exogenous agents leading to disturbances of man's adaptive mechanism—mind. There are other agents of this class equally potent if not equally prevalent—opium and its derivations, cocain, and the like. Some hair-brained extremists with exquisite myopic cerebral vision—mental deviates in other words

—now intimate that tobacco belongs in this class!

The question is, will not the alcoholic deprived by prohibition of his accustomed ration of stimulation, resort to other drugs—morphin, for example? It does not seem probable that this will occur and for several reasons. From our original premise that the alcoholic is such because of mental deviation it might logically follow that deprived of this means of solace other drugs should be substituted in its place. Yet there are other factors to consider. Alcoholism by social custom and ready access has always been easy. Other drug addictions have been more under the ban of social correction and in recent years by law made somewhat more difficult of acquirement though far from eradication. As the Harrison Act for drug control is inefficient in its enforcement so also prohibition is as yet statutory only. A final answer to this question is impossible today.

Speculation as to futurity will not bring much gain inasmuch as our subsequent experience may necessitate an entire alteration of present opinion. So far as we have yet learned prohibition has not led to an increase in other drug addictions as judged from the number of addicts coming under hospital treatment. There has been no increase attributable to this factor as yet discernible. However, as prohibition is only a statutory fact and not actually in force conclusions cannot be drawn. A larger question is perhaps deducible as a corollary to the foregoing. If alcoholism is made impossible by law and thus alcoholics are driven to other drug addictions which in turn are made legally impossible, to what then will they be driven, if to anything? Tobacco?

### TWELFTH COUNCILOR DISTRICT POSTGRADUATE MEETING

Progress toward establishing the postgraduate meetings for county medical societies is progressing satisfactorily and we anticipate that there will be such meetings in several districts beginning early in the fall. The Twelfth Councilor District is the first district to take advantage of the undertaking, the county societies in that district having scheduled a meeting to be held in Excelsior Springs on October 10. Dr. Spence Redman of Platte City is councilor for the district which is composed of the counties of Caldwell, Clay, Clinton, Daviess, Platte and Ray. In another column<sup>1</sup> we publish the minutes of the meeting at which it was decided to hold a postgraduate session and the program that has been scheduled for the occasion. We are unable at this time to mention the members who will deliver the lectures on the subjects in

1. See page 317.



the program because of the absence on vacation of a large number of members who are specially interested in the work.

The announcement on another page and in the advertising columns of clinics in St. Louis, under the caption "St. Louis Clinics," refers to the efforts of members of the St. Louis Medical Society to organize the clinical material in that city on a permanent basis and is not to be confused with the postgraduate meetings in the various councilor districts. It happens that the two undertakings have been consummated practically simultaneously. When the Council prepares a postgraduate meeting for the Twentieth District with headquarters at St. Louis there will of course be the closest cooperative activity to give visiting physicians the very best clinical instruction.

### GRADUATE INTERN TEACHING

Anyone who has had hospital experience knows that during the short time an intern is on a particular service he may or may not get acquainted with the methods of the visiting surgeon or physician. At most, in a service with shifts every two months, the relations between the physician and the intern are so brief that one feels he is just getting started when the service changes. The visiting staff of the Kansas City General Hospital has discussed this situation for some time with the view of establishing a system that would effect a closer cooperation between the staff and the resident physicians in the hospital and a plan was recently proposed and adopted which it is hoped will give the maximum benefit to the interns during their service in every department. For the purpose of carrying out this plan a committee was appointed to prepare a course of instruction to be given the interns throughout the year. This instruction is to include not only lectures but case teaching and special work detailed to the intern.

We do not know whether other hospitals in the country have adopted any systematic method of teaching graduate interns but we publish on another page\* the course prepared by the visiting staff of the Kansas City General Hospital with the hope that it will prove a benefit to others.

### KINEMATIC SURGERY IN MILITARY HOSPITALS

Remarkable results have been achieved in Italian military hospitals recently by the use of what is known as "kinematic surgery," the invention of Professor Putti of Bologna University. Professor Putti's methods have aroused

intense interest on the part of American doctors attached to the Balkan Commission of the American Red Cross, who are supervising the artificial leg factories already established and being established in Athens, Salonica, Belgrade and Bucharest for the war's mutilated.

At the present moment the allied soldiers in the Balkans who have lost their limbs are being fitted with artificial legs and arms of a type similar to that employed by Sarah Bernhardt. Professor Putti's methods, however, are a distinct advance over all other artificial appliances.

His treatment of amputated limbs consists of a unique preparation of the stump to develop a "motor" end to the cords which, after being bound together over a smooth "bearing" of bone, get as much as a 3-inch travel of the leg by means of a reeducation and coordination of the muscles of the stump.

After the stump heals, Professor Putti cuts out a flap of flesh which he folds back into an incision to take the flap. This is allowed to heal and then, through the loose flap of flesh, a metal bar with attachments to operate the artificial limb below is suspended.

The muscles of the calf and thigh readily respond after some weeks to the movement of the artificial leg and soon the pressure of the swinging of the artificial leg reeducates the muscles through the flap of flesh so that it may be said that the muscles of the stump actually operate by themselves the mechanical features of the artificial limb.

In case of a severed hand the muscle groups surrounding the bone are trained to operate catgut cords, which in turn, operate artificial fingers. Not since the introduction of débridement in American Army medical work in France has any medical innovation created so much comment.

### NEWS NOTES

DR. BORDEN S. VEEDER of St. Louis has received from Great Britain the decoration of Companion of the Order of Saint Michael and Saint George.

DR. E. H. BULLOCH, health director of Kansas City, has issued orders to public eating places to use more care in the cleansing of all eating utensils.

DR. E. S. BALLARD of St. Joseph has been elected a member of the school board to succeed Mr. S. I. Motter, who resigned, and Dr. H. DeLamater has been re-elected director of hygiene in the schools of St. Joseph.

\* See page 315.

SCOTLAND COUNTY will vote on a proposition to issue \$50,000 in bonds to build and equip a county hospital. The physicians in the county are very anxious to have the hospital built and are working for the passage of the proposition.

IN Dr. Knerr's paper on "Osteo-Sarcoma," published in our August issue, the discussion by Dr. W. A. Shelton was wrongly credited to Dr. J. G. Sheldon. We regret the error and hope this correction will serve to remove the doubt in the minds of those who are interested.

DR. S. A. NEWMAN, Superintendent, Missouri State Sanatorium, announces that microscopical examinations of sputum will be made free of cost to the physicians of the state if they will inclose stamps for reply. Address Laboratory, Missouri State Sanatorium, Mt. Vernon, Mo.

ABOUT 100 members of the St. Louis Medical Society have established a clinical section of the society and have organized the clinical material available for graduate instruction. There will be clinics in general surgery and medicine as well as in the various special branches so that visiting physicians will have an opportunity to obtain graduate instruction not hitherto open to them in St. Louis. It is announced that these clinics will be ready on October 1.

DURING July the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Abbott Laboratories: Barbitol Sodium-Abbott.

Hollister-Wilson Laboratories: Ovarian Substance-Hollister-Wilson; Desiccated Corpus Luteum-Hollister-Wilson.

Roessler and Hasslacher Chemical Co.: Sodium Dioxide, Dental-R. and H.

THE next annual meeting of the American Public Health Association is to be held at New Orleans, October 27 to 30, inclusive. The central themes of discussion will be southern health problems, including malaria, typhoid fever, hookworm, soil pollution and the privy, etc. The general belief among the health profession is that influenza will return next winter, and a full session will therefore be devoted to this subject for the purpose of developing methods of control. Two special programs will be presented on various phases of child hygiene and personal hygiene. Winter railroad rates to New Orleans will be in effect from all points after October 1. Kansas City is a strong contestant for the 1920 meeting.

DR. T. B. M. CRAIG, Superintendent of State Hospital No. 3, Nevada, has selected a number of physicians throughout the state to act as an advisory board of the hospital and the plan has received the approval of the board of managers. As far as we know this is the first time the superintendent of one of the state hospitals has created a board for the purpose of cooperating with the superintendent in an advisory capacity. The physicians appointed by Dr. Craig are: G. D. Allee, Lamar; Francis M. Barnes, Jr., St. Louis; Charles C. Conover, Kansas City; W. E. Craig, Joplin; J. L. Dills, Nevada, Dentist in Charge; E. A. Dulin, Nevada; W. J. Ferguson, Sedalia; R. B. H. Gradwohl, St. Louis; J. T. Hornback, Nevada; Jabez N. Jackson, Kansas City; G. B. Lemmon, Springfield; J. G. Love, Sedalia; O. H. McCandless, Kansas City; Tipton McLemore, Nevada; M. T. McNeil, D.D.S., Nevada; R. H. Mead, Kansas City; Lindsey S. Milne, Kansas City; J. S. Newlon, Butler; M. P. Overholser, Harrisonville; Winfred B. Post, Carthage; G. Wilse Robinson, Kansas City; J. F. Robinson, Nevada; N. I. Stebbins, Clinton; Hillel Unterberg, St. Louis; William M. West, Monett; J. M. Yater, Nevada.

## MEMBERSHIP CHANGES, JULY AND AUGUST

### NEW MEMBERS

Baehr, John H. W., New Haven.  
Baker, Cecil H., St. Louis.  
Cook, Fountain L., Independence.  
Davies, Leroy W., St. Louis.  
Davis, W. A. Jacksonville.  
DeMenil, Henry N., St. Louis.  
Duckworth, William Henry, St. Clair.  
Hamlin, Clyde W., Philadelphia.  
Johnson, Roy, Ferguson.  
Jones, Vincent L., St. Louis.  
Ogilvie, Fred L., Blodgett.  
Patchin, Horace J., Wyaconda.  
Rhea, Clarence W., St. Louis.  
Rich, Harry, St. Louis.  
Ryburn, John P., St. Louis.  
Upshaw, Harry A., St. Louis.  
Upshaw, Orin T., St. Louis.

### CHANGES OF ADDRESS

Anderson, A. L., 1004 Cherry St., Springfield, to 716 Landers Bldg.  
Bacon, Martha M., 2333 Swope Park Way, Kansas City, to 3733 Highland.  
Baldwin, F. A., Columbia, to Wesley Hospital, 11th and Harrison, Kansas City.  
Baumgartner, Conrad, 4504 Arsenal St., St. Louis, to 2844 California.  
Best, John A., High Hill to Wellsville.  
Bleyer, Adrien S., 705 Kingshighway, St. Louis, to Univ. Club Bldg.



Boemer, I. H., 300 Wall Bldg., St. Louis, to 816 Univ. Club Bldg.

Bogard, Edw., Lillbourn, to U. S. Public Health Service Hospital, Greenville, S. C.

Bradford, O. F., Columbia to Fayetteville, Ark.

Brandon, W. L., Brosley, to 104 S. Main St., Poplar Bluff.

Brown, Wm. G., Bosworth, to De Witt.

Broyles, Glen H., Bethany, to 5815 Prospect Ave., Kansas City.

Brunig, F. H., 3706 Central St., Kansas City, to 2301 Metropolitan Ave., Argentine, Kan.

Bryan, E. M., Tenth St., Fulton, to Blytheville, Ark.

Cameron, Solon, 302 Odd Fellows Bldg., St. Louis, to 720 Metropolitan Bldg.

Carter, Howard, 40 E. Lockwood, Webster Groves, to Marine Hospital, St. Louis.

Cecil, G. E., Flat River, to Ardmore.

Clark, M. H., 713 Lathrop Bldg., Kansas City, to 1222 Rialto Bldg.

Crossen, H. S., 5423 Bartmer Ave., St. Louis, to 311 Metropolitan Bldg.

Cumpton, Victor J., Pleasant Gap, to Spruce.

Davis, Frank L., Delmar Bldg., St. Louis, to Univ. Club Bldg.

Davis, Wm. D., 3879 Hartford, St. Louis, to 3832 Lindell Blvd.

Dean, Wm. T., 2342 S. Grand Ave., St. Louis, to 5675 Waterman.

Denslow, F. M., 922 Rialto Bldg., Kansas City, to 3015 Grand.

Denton, W. H., Micola, to Caruthersville.

Dowell, H. S., Clearmont, to Maryville.

Dudley, Clifton R., Berlin Hotel, St. Louis, to 706 Carleton Bldg.

Edwards, F. T., Keota to Mitchellville, Iowa.

Falk, O. P. J., St. John's Hospital, St. Louis, to 910 Univ. Club Bldg.

Farris, H. Lee, Frisco Hospital, St. Louis, to Paris Sanatorium, Paris, Texas.

Frame, Homer G., Mountain Grove to 919 Oak St., Carthage.

French, John A., 408 S. 8th St., St. Joseph, to 215 S. 15th St.

Gauen, George O., 3636a Pestalozzi, St. Louis, to 3651 Delmar.

Gifford, Allen W., Springfield, to 624 Landers Bldg., Springfield.

Gilliland, O. S., 403 47th St., Kansas City, to 124 Maple, Tacoma Park, D. C.

Glaser, M. J., 1825 S. Jefferson Ave., St. Louis, to 2750 Russell Ave.

Goldman, M., 1222 Rialto Bldg., Kansas City, to 736 Reserve Bank Bldg.

Gray, Isabel S., 4716 McPherson Ave., St. Louis, to 6175 Washington Ave.

Gray, I. S., 5175 Delmar Blvd., St. Louis, to 4716 McPherson Ave.

Grosse, Louis W., 3665 Juniata, St. Louis, to 14 Parkland Place.

Gulman, C. N., 527 Delmar Blvd., St. Louis, to 216 Univ. Club Bldg.

Harrison, Alfred W., Warrensburg, R. R. No. 13, Knobnoster.

Hawley, Nelson J., 3864 Cleveland Ave., St. Louis, to 410 International Life Bldg.

Higdon, E. E., Morley to Fredericktown.

Holt, A. T., Dunlap to Tusculum, Tenn.

Horst, O. C., 1219 Benton Ave., Springfield, to 808 Belmont.

Hunker, Lewis, 2037 Franklin Ave., St. Louis, to Higginsville.

Hutton, Joseph L., 2752a Cherokee, St. Louis, to 316 Frisco Bldg.

Kessler, E. B., 2425 S. 12th St., St. Joseph, to 2207 S. 14th St.

Kessler, E. B., 2207 S. 14th St., St. Joseph, to 2236 S. 11th.

Kloppel, Carl F., Ensworth Hospital, St. Joseph, to Tarkio.

Limbaugh, Walter L., Hollywood to Hornersville.

Lowe, H. A., 1124 E. Elm St., Springfield, to 1020 Landers Bldg.

Major, Ralph H., Liberty to Bell Memorial Hospital, Rosedale, Kan.

Mankopf, B. E., 305 Grand Ave., Memphis, to 117 Main St., Washington.

May, Benjamin F., 5086 Westminster Place, St. Louis, to Univ. Club Bldg.

McRaven, Cyrus P., Jamestown to 624 Meriwether St., Cape Girardeau.

Michie, T. A., Tyler, to Steele.

Mitchell, S. L., Licking, to Rolla.

Moore, George A., Humphreys to Hale.

Morse, F. L., 2504 N. 14th St., St. Louis, to Univ. Club Bldg.

Nickell, L. O., Macon to Woodland Hospital, Moberly.

Nickson, Charles E., Mt. Washington, to Bank Bldg., Sugar Creek.

Nieweg, G. A., Vancleve, to Houstonia.

Olmsted, William H., Cedar Rapids, Iowa, to 600 S. Kingshighway, St. Louis.

Patterson, H. H., Clarksdale, to Braymer.

Patton, Wm. G., Farmington, to 417 Univ. Club Bldg., St. Louis.

Peelor, James O., Mullanphy Hospital, St. Louis, to 2506 N. 15th St.

Pollock, Max, 3659a S. Grand Ave., St. Louis, to 5827 Enright.

Porter, Allen L., 1034 Rialto Bldg., Kansas City, to 3601 Central.

Potter, Wm. A., 4248 W. Pine St., St. Louis, to 417 Univ. Club Bldg.

Pringle, John A., City Hospital, St. Louis, to 316 Frisco Bldg.

Quigley, Byron T., Mound City to 310 Phys. and Surgs. Bldg., St. Joseph.

Reder, Francis, 706 N. Kingshighway, St. Louis, to 415 Univ. Club Bldg.

Reinhardt, G. H., 5958 Kingsbury Pl., St. Louis, to Lister Bldg.

Remley, A. R., Pattonsburg, to Richmond.

Ritchie, Frances R., 5282 Waterman Ave., St. Louis, to 5238 Watterman.

Sale, Llewellyn, Univ. Club Bldg., St. Louis, to Wall Bldg.

Schwein, Bertha O., 517 Prospect Ave., Kansas City, to 3919 Forest Ave.

Schroeder, H. A., Braymer, to 217 N. Union St., Independence.

Sheahan, Edwin L., 1201 Clara Ave., St. Louis, to 858 Hamilton Ave.

Shahan, W. E., 6170 McPherson Ave., St. Louis, to 6118 Waterman Ave.

Simon, Selig, Anglum, to 625 Univ. Club Bldg., St. Louis.

Stock, George A., Webb City to Sea View Hospital, West New Brighton, N. Y.

Tarson, Solomon S., Leadwood, to Elvins.

Tate, P. S., 917 E. 47th St., Chicago, Ill., to Farmington, Mo.

Tyree, James I., 513 Commerce Bldg., Kansas City, to 611 Frisco Bldg., Joplin.

Vaughan, J. R., 6204 Delmar Ave., to 5241 Waterman.

Vasterling, Paul F., Missouri Pacific Hospital, St. Louis, to 1600 California Ave.

Veeder, Borden S., Univ. Club, St. Louis, to 608 Humboldt Bldg.

Vickrey, Aden C., City Sanitarium, St. Louis, to 5069 Maple.

Viley, Leland P., 31st St. and Troost Ave., Kansas City, to 507 Westover Bldg.

Vinyard, Paul, 800 Third National Bank Bldg., St. Louis, to 612 Wall Bldg.

Weaver, John S., 904 E. 43rd St., Kansas City, to 316 Grand Ave., Temple Bldg.

Weiss, William, 3128a Arsenal, St. Louis, to 3661 Lafayette.

Wright, C. G., 55 Union St., Oberlin, Ohio, to 5455 Delmar Blvd., St. Louis.

Wysong, Wm. L., Missouri City, to Liberty.

#### TRANSFERRED

Ball, Otho F., Chicago, Ill., from St. Louis Medical Society to Chicago (Ill.) Medical Society.

Duffie, W. M., Burlingame, Kan., from Caldwell County Medical Society to Kansas Medical Society.

Edler, William A., St. Louis, from St. Louis Medical Society, to Douglas County (Neb.) Medical Society.

Goodman, Samuel, Kansas City, from Jackson County Medical Society to Oklahoma State Medical Society.

Hyder, Ira F., Lamar, Colo., from Clay County Medical Society to Colorado Medical Society.

Kempff, L. A., St. Louis, from St. Louis Medical Society to Los Angeles County (Calif.) Medical Society.

McClure, W. B., Hale, from Carroll County Medical Society to Kansas State Medical Society.

O'Connell, John, Pomeroy, Ia., from St. Louis Medical Society to Calhoun County (Iowa) Medical Society.

#### DROPPED

Everett, Alfred E., Granite City, Ill.

Pike, C. J., Willard.

Walker, E. N., Springfield.

Wright, J. P., Springfield.

#### RESIGNED

Johnston, Meredith R., St. Louis.

Ragan, Wilson L., Miller.

Woody, C. E. Springfield.

#### DECEASED

Cadwallader, Isaac H., St. Louis.

Chaffin, Robt. E., Nevada, Ia.

Drechsler, Louis, St. Louis.

Duncan, John H., St. Louis.

Frielingsdorf, E. H., St. Louis.

Friedman, Jacob, St. Louis.

Latham, Henry W., Latham.

Moore, Andrew W., Fayette.

Robinson, W. S., Holland.

Rush, G. B., Slater.

## CORRESPONDENCE

### ANESTHETICS BY NURSES

Several members have inquired concerning the legal status of the nurses with regard to administering anesthetics. We wrote Attorney-General McAllister for an opinion on the subject and received a reply which apparently acknowledges that nurses may administer anesthetics if it is done under the immediate supervision of a licensed physician. The opinion follows:

JEFFERSON CITY, Mo., Aug. 4, 1919.

DR. E. J. GOODWIN, Secretary,  
Missouri State Medical Association,  
3529 Pine Street, St. Louis, Mo.

Dear Sir:—Your communication of July 24, directed to this department, inquiring as to whether or not nurses may legally administer anesthetics, has been received and referred to me for reply.

Upon investigation, I am unable to find anything which seems to authorize the administration of said anesthetics by nurses except as same may be made under the immediate supervision or direction of a licensed physician and surgeon.

With best regards, I beg to remain,

Very truly yours,

(Signed) C. P. LEMIRE,

Assistant Attorney-General.



## PHYSICIAN WANTED

WEST PLAINS, Mo., Aug. 16, 1919,

DR. E. J. GOODWIN,  
3529 Pine Street, St. Louis, Mo.

*Dear Sir:*—The people of Peace Valley, Mo., a small village in Howell County, have asked me to put them in touch with a young man who would be willing to cast his lot with them as a physician and become one of them. They promise the patronage of fifty families to start with and if satisfactory there is a large territory which would be his.

Their resident doctor lives 3 miles away, is old and able to retire and has almost done so.

I feel that this is a good opportunity for a young doctor who could be satisfied away from the city and from the railroad, for the town is 14 miles inland but the people are above the average of inland communities.

If you can put this before any one who would be interested you would do a favor to both the doctor and these people.

Anyone interested might address P. W. Lynch of Peace Valley or me.

Yours truly,

E. L. PETER, County Agent.

## STANDARDIZE COUNTY HOSPITALS

COLUMBIA, Mo., Aug. 8, 1919.

*To the Editor:*—A matter of some considerable importance to the medical profession of the state is the recent county hospital law making it possible to erect a general hospital in our more populous counties. Several counties now have hospital buildings in progress. A problem of some difficulty is to "standardize" these hospitals and make them most efficient and useful as they must of necessity be "open" hospitals. They can be made most useful community service centers and great factors in medical team work with the country doctors. As educational factors they may go much further than that.

Now, what we need in Missouri is complete medical education furnished by our state university. We do not have it on account of lack of clinics. It is the obligation of the state to make doctors as much as to make lawyers or engineers. This does not admit of argument. The organized medical profession of the state should demand this of our legislature and our university. Let us first ask for a large state hospital for our medical department of the university to be used for clinical teaching. Our next legislature should appropriate the money for this hospital. Why may we not also utilize our numerous county hospitals that are building, by articulating them with the state hospital after the manner of articulation of the high schools and junior colleges with the university?

They would be great feeders to the state hospital and send many valuable clinical cases for teaching. The county service would also benefit greatly by having this supplemental and helpful work. This work might be extended further and further both in laboratory and clinical work. Interchange of nurses and interns in training would be a factor of advantage and many other details might be worked out. Best of all it would make it much easier to "standardize" our county hospitals and bring them up to a proper standard of excellence they may not attain without such help. The effect on the local profession of counties would be most excellent, promoting team work and stimulating greatly by keeping men in touch with current medical education. County hospitals properly managed will be great factors in helping us maintain our democratic ideals of service and in preventing socialistic medicine.

It is my hope that these few suggestions will meet with some sympathetic response from the profession and if so I am sure a perfectly practical and very valuable plan can be presented in the near future when I may be permitted more space than is allowed in a first communication.

FRANK G. NIFONG.

## MISCELLANY

HONORABLY DISCHARGED, MEDICAL  
CORPS, U. S. ARMY AND NAVY

Alexander, R. D., St. Louis; Atwood, W. G., Carrollton.

Baker, E., St. Louis; Beall, H. E., Malden; Bird, J. B., Kansas City; Boone, J. C., Charleston; Bowles, T. K., Kirkwood; Burns, R., Jr., St. Louis.

Calhoun, J. G., St. Louis; Callaghan, R., Kansas City; Cameron, Solon, St. Louis; Campbell, O. H., St. Louis; Cavaness, E. W., Kansas City; Chenoweth, J. A., Joplin; Cleveland, H. F., St. Louis; Clint, M. L., Meadville; Clithero, W. H., St. Louis; Connell, E. S., Kansas City; Cooper, T. E., St. Louis; Craven, Y. D., Excelsior Springs; Culbertson, W. F., Kansas City.

DeWeese, E. R., Butler; Dickson, F. D., Kansas City; Diehr, A. H., St. Charles.

Elliott, J. R., Clarksdale.

Ferguson, M. J., Kansas City (Navy); Ferris, D. P., St. Louis; Fleisher, M. S., St. Louis; Fletcher, P. R., St. Louis; Floyd, W. N., Middletown; Forgrave, L. P., St. Joseph; Funsch, E. C., St. Louis.

Gay, R. J., New Hartford; Getelson, J., Kansas City; Gordon, F. N., St. Louis; Grier, M. E., Kansas City; Grim, E. C., Kirksville.

Hall, S. M., Clarence; Hamilton, H. D., Kansas City; Hanna, Minford A., Kansas City; Happel, H. E., St. Louis; Hartigan, F. X., St. Joseph; Hartley, U. E., Nebo (Navy); Hedge, M. O., Kansas City; Heibner, E. A., Sedalia; Hein, E. E., St. Louis; Hennerich, Walter E., St. Louis (Navy); Herrick, H. C., St. Louis; Hoagland, W. L., Kansas City; Holbrook, W. F., Kansas City; Horigan, J. A., Kansas City; Hume, J. R., Doniphan; Hutton, Joseph L., St. Louis.

Jenkins, C. E., Brookfield; Johnson, A. N., Kansas City; Johnson, G. C., Belle; Joseph, D. R., St. Louis.

Kirkham, A., Excelsior Springs; Knecht, L. B., Poplar Bluff; Koch, O. W., Ballwin.

Larimore, J. W., St. Louis; Leggat, A. C., St. Louis; Limbaugh, W. R., Hollywood; Lyttle, G. C., St. Louis.

McCarthy, E. F., St. Louis; McCarty, H. E., Kansas City; McHaffie, C. H., Ash Grove; McKellops, L. G., St. Louis; McKenzie, E. M., St. Louis; McKeynolds, R., Knox City; Matlock, W. L., Sedalia; Meanwell, W. E., Columbia; Mellies, G. A., St. Louis; Mestemacher, L. H., St. Louis; Miller, T. V., Sikeston; Milligan, R. H., Kearney; Mullinax, C. E., Princeton.

Orr, C. H., Ash Grove; Owen, R. E., St. Louis.

Paul, T. M., St. Joseph; Pawelek, L. G., St. Louis; Perry, D. C., Mound City; Petty, W. S., Rutledge; Powers, J. A., Warrensburg; Powers, J. W., Kansas City; Presnell, U. A., Kennett; Pringle, John A., St. Louis.

Ralls, L. B., Centerville; Ramming, H., Goodwater; Ranson, J. R., St. Louis; Reim, W. H., St. Louis; Riley, G. L., St. Louis; Rossen, J. A., St. Louis.

Sante, L., St. Louis; Schmalhorst, D. E., St. Louis; Schoenfield, O. E., Lathrop; Schumacher, H. W., St. Louis; Schwald, N. A., Cole Camp; Seibert, D. A., Washington; Sellers, C. L., St. Louis; Sewell, M. F., Malta Bend; Shepherd, H. A., Moscow Mills; Slaughter, S. C., Fredericktown; Smith, M. A., Gallatin; Statler, W. K., Oakridge; Steinmann, W. A. H., St. Louis; Stone, A. R., Palmyra; Stuart, F. I., Independence; Sullivan, F. J., St. Louis.

Teachenor, F. R., Kansas City; Thompson, P., Brumley; Tilles, R. S., St. Louis; Timberman, D., St. Louis; Treasure, B. R., McFall.

Unterberg, H., St. Louis; Upshaw, H. T., St. Louis.

Walker, J. M., Kansas City (Navy); Wallace, Hilen K., St. Joseph; Wallen, L. H., Summerville; Westerman, C. M., St. Louis; Wheeler, W. M., Sedalia; White, J. B., St. Louis; Whiteside, E. E., Elvins; Wichman, A. G., St. Louis; Wilfley, O. S., Webb City; Wilkin, T. J., Saline; Williams, L. E., Clever; Williams, P. R., Cape Girardeau; Williams, R. H., St. Clair; Wills, W. J., Springfield; Wilson, J., Bloomfield.

## CLASSES FOR INTERNS

Kansas City General Hospital, August, 1919, to June, 1920

The schedule of lectures and other means of instructing interns in the Kansas City General Hospital referred to in our editorial columns are given below. The schedule comprises lectures, clinical demonstrations, reviews by interns and the presentation of practical history and physical examination, together with a demonstration of the case by each intern during the year. The interns will elect their own officers to keep in touch with the lecturers and the members of the house staff who are to have a place on the program. The schedule:

### Lectures

Number	Subject
7	Surgery
2	Orthopedics
2	Genito-Urinary
2	Oral Surgery and Hygiene
2	Nose and Throat
2	Eye
1	Ear
3	Obstetrics
2	Roentgen Ray
6	Internal Medicine
2	Pediatrics
2	Contagious Diseases
2	Dermatology
2	Neurology
2	Laboratory
2	Practology

There will be one lecture weekly, on Saturday night, from August 16 to June 15 (Christmas and Thanksgiving week excepted).

### Surgery

It is suggested that during the lecture course at least one case be demonstrated each evening by the lecturer, or other member on the service.

Sept. 6, 1919—Dr. Jabez N. Jackson. Subject: "General Physical Condition of Patient as Indication for Surgical Operation."

Sept. 13, 1919—Dr. Howard Hill. Subject: "Surgical Anatomy of Human Pelvic Floor."

Jan. 3, 1920—Dr. J. F. Binnie. Subject: "Gunshot Injuries."

January 10—Dr. H. E. Pearse. Subject: "Management of Fractures."

May 22, 1920—Dr. J. P. Henderson. Subject: "Intestinal Obstruction."

May 29—Dr. H. P. Kuhn. Subject: "Surgery of the Thorax."

June 5—Dr. J. G. Hayden. Subject: "Diagnosis of Diseases of Right Hypochondrium."

Intern to present history, physical examination and demonstration of case once during the course. Twenty-minute review of the current surgical literature by surgical intern once during the course.

### Orthopedics

January 17—Dr. Robert M. Schauffler. Subject: "Principles of Orthopedics."

April 17—Dr. Frank N. Dickson. Subject: "Subacute and Chronic Joint Diseases and Their Treatment."

During the lecture course, cases to be demonstrated by the lecturer. Ten-minute review of the current orthopedic literature by intern once during the course.

### Genito-Urinary

October 18—Dr. Clinton K. Smith. Subject: "Complications of Gonorrhea."

January 24—Dr. Frank M. Denslow. Subject: "Tuberculosis of the Genito-Urinary Tract."

Ten-minute review of the current literature by intern.

### Oral Surgery and Hygiene

Aug. 23, 1919—Dr. Edgar Smith. Subject: "Oral Surgery."

Jan. 31, 1920—Dr. Donald F. Mosher. Subject: "Dental Pathology."

### Nose and Throat

Aug. 30, 1919—Dr. A. J. Lorie. Subject: "Nasal Obstruction."

Feb. 7, 1920—Dr. D. L. Shumate. Subject: "Examination of the Larynx and Bronchi."

Presentation of history, physical examination and demonstration of case by intern. Ten-minute review of the current literature on nose and throat diseases.

### Eye

February 14—Dr. J. H. Thompson. Subject: "Examination of the Eye."

March 6—Dr. J. S. Lichtenberg. Subject: "Differential Diagnosis: (a) Acute Conjunctivitis; (b) Acute Iritis; (c) Acute Glaucoma."

Ten-minute review of current literature on the eye by intern.

### Ear

February 21—Dr. T. S. Blakesley. Subject: "Demonstration of Methods of Examination."

Ten-minute review of the current literature of the ear by intern.



**Obstetrics**

Oct. 4, 1919—Dr. C. A. Ritter. Subject: "Technic of Normal Labor."

November 1—Dr. George C. Mosher. Subject: "Toxemia of Pregnancy."

April 3, 1920—Dr. M. A. Hanna. Subject: "Treatment of Abortion."

Twenty-minute review of current literature on obstetrics.

**Roentgenology**

November 8—Dr. L. A. Marty. Subject: "When and How to Use the Roentgen Ray in Diagnosis."

February 8—Dr. L. A. Marty. Subject: "The Value of the Roentgen Ray in Diagnosis."

Interpretation of roentgen ray by intern.

**Internal Medicine**

Sept. 20, 1919—Dr. Robert T. Sloan. Subject: "Physical Examination of the Chest."

September 27—Dr. C. C. Conover. Subject: "Examination of the Stomach."

November 15—Dr. G. H. Hoxie. Subject: "Lobar pneumonia and Complications."

November 22—Dr. L. S. Milne. Subject: "Disturbances of Internal Secretions."

March 13—Dr. F. M. Lowe. Subject: "Diagnosis of Acute Febrile Conditions."

March 20—Dr. Hugh D. Hamilton. Subject: "Diseases of Heart."

Presentation of history, physical examination and demonstration of case by intern. Twenty-minute review of current literature on internal medicine by intern.

**Pediatrics**

October 11—Dr. H. C. Berger. Subject: "Feeding and Nutrition."

March 27—Dr. R. B. Platt. Subject: "Rickets and Scurvy."

Presentation of history, physical examination and demonstration of feeding of sick case by intern. Twenty-minute review of current literature on pediatrics by intern.

**Contagious Diseases**

October 25—Dr. E. H. Schorer. Subject: "Menigitis, Measles and Pertussis."

December 6—Dr. C. C. Dennie. Subject: "Smallpox." Dr. Frank C. Neff, "Diphtheria and Scarlet Fever."

Ten-minute paper by intern on the practical handling of a case of diphtheria. Ten-minute review of current literature on contagious diseases by intern.

**Dermatology**

December 13—Dr. W. L. McBride. Subject: "The Early Manifestations of Syphilis."

April 10—Dr. William Frick. Subject: "Some Common Skin Diseases."

Ten-minute review of current literature on dermatology by intern.

**Neurology**

August 16—Dr. G. Wilse Robinson. Subject: "Psychoneuroses."

May 8—Dr. A. L. Skoog. Subject: "Cerebrospinal Fluid."

Presentation of history, physical examination and demonstration of case by intern. Twenty-minute review of current literature on neurology by intern.

**Laboratory**

December 20—Dr. D. O. Smith. Subject:

April 24—Dr. D. O. Smith. Subject:

**Proctology**

May 1—Dr. W. H. Coffey. Subject: "Treatment of Hemorrhoids."

May 15, 1920—Dr. S. B. Hibbard. Subject: "Stricture of Rectum."

Committee of the Staff,

GEORGE C. MOSHER,

HOWARD HILL,

FRANK C. NEFF, *Chairman.*

**SOCIETY PROCEEDINGS****COUNTY SOCIETY HONOR ROLL, 1919**

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Dec. 14, 1918.  
Webster County Medical Society, Dec. 23, 1918.  
Cedar County Medical Society, Dec. 30, 1918.  
Pike County Medical Society, Jan. 8, 1919.  
Vernon County Medical Society, Jan. 20, 1919.  
Chariton County Medical Society, Jan. 25, 1919.  
Wayne County Medical Society, Feb. 12, 1919.  
Camden County Medical Society, Feb. 14, 1919.  
Atchison County Medical Society, Feb. 26, 1919.  
Ralls County Medical Society, Feb. 27, 1919.  
Ste. Genevieve County Medical Society, Feb. 27, 1919.  
Nodaway County Medical Society, March 24, 1919.  
Laclede County Medical Society, March 31, 1919.  
Oregon County Medical Society, April 7, 1919.  
Cass County Medical Society, April 16, 1919.  
Adair County Medical Society, April 17, 1919.  
Cape Girardeau County Medical Society, May 8, 1919.  
Newton County Medical Society, May 12, 1919.  
Carroll County Medical Society, July 2, 1919.  
Greene County Medical Society, July 2, 1919.  
Clay County Medical Society, July 8, 1919.  
Johnson County Medical Society, Aug. 20, 1919.

**REPORTS OF COUNCILORS**

Eugene L. Crowson, Councilor First District;  
Counties: Atchison, Holt, Nodaway

Atchison County: During the past year only one meeting was held. The present membership of fifteen are all in good standing. Officers of 1918 were reported for 1919. All arrangements were made for a meeting to elect officers and transact business last fall but at that time the influenza was prevalent and it was impossible to obtain a quorum. War conditions also had a retarding effect. The prospects are better for the future. Members are enthusiastic and are anxious to keep the organization active. Atchison County Society is on the Honor Roll.

Holt County: Fifteen members have paid dues for 1919 and two meetings have been held. Attendance about one-half of membership. One member has died, Dr. J. L. Hogan.

Nodaway County: No records of meetings held during 1918. On February 7 officers were elected and an active campaign instituted to increase the membership. Present membership is thirty-eight. So far during 1919 five meetings have been held, with an average attendance of nine members. Three members are still in service overseas. Nodaway County Society is on the Honor Roll with bright prospects for the future.

**G. W. Whiteley, Councilor Third District; Counties: Dekalb, Harrison, Gentry, Worth**

All the counties of my district are now organized and have been very active as to the government requirements for men in the last year and I believe gave their quota as far as they could. They also held some meetings but the war was the subject most discussed. As my time was mostly taken up with my duties as physician for the local board of Gentry County the most of the past year I have not looked after my counties as close as I probably should have done.

**D. A. Barnhart, Councilor Tenth District; Counties: Macon, Monroe, Randolph**

Randolph County now has twenty-three physicians, not counting retired ones. They have fifteen members who have paid their state and county dues for the year. We have only had two meetings in the last year. We had ten physicians to enter the service of the medical corps, four of whom are still in service.

Macon County Society meets regularly once a month and is one of the most wide-awake societies in the state. They use the Cabot Clinics and always have interesting and profitable meetings. They have thirty-five physicians in their county and twenty-four have paid their state and county dues. They had seven members enter the medical corps with three still in service.

I did not get a report from Monroe County but we hope to see them reorganized and doing good work by this time next year.

**Spence Redman, Councilor Twelfth District; Counties: Platte, Clay, Ray, Clinton, Caldwell, Daviess**

Medical Society activity throughout the Twelfth Councilor District during 1918 was not up to the usual high standard. This was not because of a slacking in interest but due to the increased demands on the profession because of the influenza epidemic, which raged severely over the entire district, and the depleted ranks of the profession because so many were in the service of their country and those at home had much war work. However, even with this handicap, all the societies did a creditable amount of scientific work. The Clay County Society, because of its larger membership and progressive spirit, led all the others in the number of meetings held and also in attendance.

The Twelfth District furnished forty-two volunteers for service who were accepted and half as many more were rejected for various reasons. Of those who saw service, fourteen were from Clay County, two of whom, Dr. George Dagg of North Kansas City and Dr. Burton Maltby of Liberty, were decorated with the Croix de Guerre and the Distinguished Service Medal; four were from Caldwell County, five were from Daviess County, one of whom, Dr. F. V. Frazier of Altamont, who went early to France, while giving first aid in a dugout in the first line trenches, was wounded by a bursting shell and died a few days later from his injuries; seven were from Clinton County, five were from Ray County and seven were from Platte County.

Dr. T. J. Ward of Birmingham was the only member lost by death of whom I have knowledge.

All the societies paid the dues of their members who were in the service and many members returned a portion of the fees derived from their patients while they were with the colors.

**H. S. Crawford, Councilor Fifteenth District; Counties: Cass, Johnson**

The interest in organized medicine is strong. There has been excellent interest during the period of the war and the epidemic of influenza. Now that conditions are more settled I predict renewed energy in medical organization.

Johnson County has a membership of twenty-three and eight meetings were held during the year. Six members were in active military duty during the war.

Cass County has a membership of twenty-eight and held four meetings during the year. Seven members were in active military duty, and one of them made the "supreme sacrifice," Dr. W. A. Fair, Pleasant Hill, who was killed in action in France.

## TWELFTH COUNCILOR DISTRICT

Pursuant to a call by Dr. Spence Redman, Councilor of the Twelfth District, the officers of the county societies in this district met in the Midland Hotel, Cameron, Thursday evening, August 7, 1919.

Dr. J. E. Musgrave of Excelsior Springs was elected chairman, and Dr. J. J. Gaines of the same place, secretary for this meeting.

The representatives present were: Clinton County, Drs. R. W. Rea and C. W. Chastain. Platte County, Drs. A. S. Herndon and S. L. Durham. Daviess County, Drs. J. D. Dunham and N. M. Wetzel. Clay County, Drs. J. E. Musgrave and J. J. Gaines. Ray and Caldwell Counties were not represented. Other members present were: Drs. P. M. Steckman of Plattsburg, M. L. Peters and A. O. Gilliland of Cameron, Spence Redman of Platte City.

The Councilor read a letter from Dr. Hamel of St. Louis relative to the aims and procedures of the proposed postgraduate course, and an editorial from the July JOURNAL, by Dr. Goodwin, whereupon, Dr. Rea of Plattsburg offered the following resolution:

*Resolved*, That the officers of the societies in the Twelfth Councilor District heartily indorse the proposed plan of instituting a system of postgraduate study for the county societies of Missouri. Seconded and adopted unanimously.

It was moved that Excelsior Springs be the place of the postgraduate meeting, the date, October 10, from 1 to 10 p. m., at Snapp Hotel. Carried unanimously.

## PROGRAM

1. Acute Bronchopneumonia and Sequelae, 1 to 2:30 p. m.

2. Neuritis; Pathology, Symptomatology and Treatment, 2:30 to 4, with clinical cases.

3. Ulcerations in the Digestive Tract; Bacteriology and Diagnosis, with clinical cases, 4 to 5:30.

Dinner.

4. Hypertension; Pathology and Treatment, with clinical cases, 7:30 to 10.

On motion each county secretary within the district was urged to notify each member of his society of this program and the place of meeting a few days prior to the meeting and to enjoin attendance.

It was moved that the officers of this meeting serve until after the meeting in October, as outlined above. Carried.

A motion thanking the Midland Hotel in Cameron for courtesies, carried.

J. E. MUSGRAVE, M.D., Chairman.

J. J. GAINES, M.D., Secretary.

## FRANKLIN COUNTY MEDICAL SOCIETY

The regular August meeting of the Franklin County Medical Society was held on August 5 in Leber's Hall, Pacific. The hour of the meeting was so arranged as to enable most of the members to attend the session after the day's work was practically over and still leave time to return home the same night.

A quorum being present the following business was transacted: The minutes of the meeting of May 6, 1919, were read and approved.



The censors' report on the application of Dr. W. H. Duckworth of St. Clair being favorable, he was elected to membership in the Society.

Dr. John H. Baehr of New Haven was elected a member of this Society by transfer from the Indiana (Pa.) County Medical Society.

The following is the personnel of the newly appointed committee on Public Health and Legislation: Drs. Eugene M. Lucke, Gray Summit, chairman; Albert L. McNay, Pacific; William H. Duckworth, St. Clair.

At this meeting we were favored by the presence of three distinguished visitors: Dr. E. J. Goodwin, secretary of the Missouri State Medical Association; Dr. A. H. Hamel, councilor for our district, and Dr. H. H. Kramolowsky, a rising young urologist.

Dr. Kramolowsky's contribution on "Poststatic Disease" was intensely interesting and unusually practical in outlining recent great advances in what can be done by both the physician and the specialist in palliative and radical relief of patients suffering from this most obstinate and trying disease.

Dr. Hamel's personal experiences and observations in the recent "Flu" epidemic revealed a wealth of careful, comparative observation by one of acumen and conscience.

Dr. Goodwin explained the purpose of the proposed District Postgraduate Meetings. We believe the inauguration of these postgraduate meetings will be instrumental in bringing before the entire profession the great problems of modern medicine, and that the members will gain a vast amount of information of a special and useful character. Dr. Goodwin's talks show that he is heart and soul in the work for advancing every interest of the members whom he serves with such tireless enthusiasm, faithfulness and altruism.

What these gentlemen of experience and superior ability gave us was worth going far to hear. It was a rare treat. Those unable to be present missed a most pleasant and profitable meeting.

Out of courtesy to our distinguished visitors the entire time was given to them, and the reading of the paper by Dr. Briegleb on "Diabetes Mellitus, an Infection—Communicable, Curable," was deferred until the next regular meeting, which will be on the first Tuesday in November at Pacific, unless otherwise notified to the contrary.

H. A. MAY, M.D., Secretary.

#### GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society was called to order in Heneke's Hall at Owensville, July 24, at 2 p. m., Dr. J. J. Radmacher presiding. The following doctors were present and participated in the proceedings: President J. J. Radmacher of Argyle, F. Aufderheide of Drake, H. G. Isenberg of Meta, M. E. Spurgeon of Red Bird, C. A. Bunge and J. D. Seba of Bland, Captain Mills and J. J. Ferrell of Owensville, Roland Hill, Homer Whelon and F. D. Gorham of St. Louis.

Dr. Whelon read a paper on the physiological action of the stomach. He was followed by Dr. Gorham with a paper along the same line dealing with the treatment and proper diet during disorders of the stomach. These two papers were thoroughly discussed by the doctors present and much valuable information was obtained. A desire was expressed by some of the members to have these two papers published in the JOURNAL.

Dr. Roland Hill then reported several important cases on which he had performed surgical operations with recovery. One was that of meningitis in which he had performed laminectomy with recovery. An-

other case was that of a posterior pharyngeal abscess with tracheotomy and recovery.

Dr. Ferrell presented a case of abdominal tumor for diagnosis with the result that opinion greatly differed as to a correct diagnosis.

The next meeting will be held at Red Bird, Oct. 11, 1919.

JOHN D. SEBA, M.D., Secretary.

#### HENRY COUNTY MEDICAL SOCIETY

Henry County Medical Society met in regular session at Windsor on Wednesday, August 13, at 2:15 p. m., and Dr. C. W. Head was called to the chair. Those present were: Drs. C. W. Head, W. P. Bradley, T. A. Blackmore, H. M. Wall, R. J. Jennings, J. H. Walton, M. E. Bradley, F. M. Douglass. Drs. R. L. Shadburn of Windsor and C. C. Conover of Kansas City, and Mesdames Blackmore, Walton, Jennings and Wall, wives of members, were guests.

Dr. Conover commenced his lecture on "Intestinal Stasis" by giving some anatomical facts about the heart and intestines, and how these structures had similar action at certain times. At this juncture Dr. S. W. Woltzen, our president, arrived and assumed the chair, and Drs. E. C. Peelor, S. A. Poague and F. A. Finley came with him. Resuming his discourse Dr. Conover exhibited pictures which showed the tissues in question, explained their actions, what results could be looked for, told by whom this was thought out and when, what symptoms they produced, how to interpret them, spoke of the best way to treat such cases and gave the history of some cases that showed the benefits obtained. Each one present was impressed by the talk, and showed by their questions that they were greatly interested in the subject. Dr. Conover answered each understandingly.

This lecture was of special interest to the general practitioner. It is the thinker that reads and understands and can impart his knowledge in a manner that will impress his audience, that counts. Any doctor that misses a lecture of this kind is the loser and causes the society to look bad in some way. Why? Not present.

Dr. Robert J. Jennings was called on and gave us a very nice talk of his work overseas, leaving out details of statistics and gresome features. He claimed we all should know the necessity of the instruction that was given at the training camps; each doctor should know military tactics and topography with the same intentness that he did of sanitation and hygiene, and be up in first aid work in every detail. He gave a short history of the places where he had been and what he did, having at one time the command of 250 men. To do good service in the field, he said, one should use his brains to the limit, keep his nerve and conserve muscular action.

At this time a recess was called, a refectation of ice cream demanded attention and was disposed of with much satisfaction.

Announcements were made in regard to the work of the Society.

F. M. DOUGLASS, M.D., Secretary.

#### SCOTLAND COUNTY MEDICAL SOCIETY

Scotland County Medical Society met in the office of the secretary at 2 p. m., July 23, with Dr. P. M. Baker, president, in the chair and the following members present: Drs. A. E. Platter, A. L. Davis, J. A. Shacklett, E. E. Parrish, and C. A. Gibbs as a visitor from Greensburg. Dr. Gibbs' application for membership is in the hands of the Society and will be acted on at the next meeting.

Dr. W. S. Petty of Rutledge, late captain in the Medical Corps, was with us and gave some informa-

tion as to his duties and life in France and Germany, he having been in the army of occupation stationed around Coblenz

The application of Dr. Samuel W. Holt, Rutledge, on transfer from the Lewis County Medical Society, for membership in this Society was presented, and on motion Dr. Holt was received as member of this Society.

The Society decided to have the present officers continue in office until the annual meeting in December, when the election of officers takes place.

Our Society has not been as active as it should have been on account of the war, which upset the physicians as well as the rest of the world, but I believe we will in the future "be on the job" and can have our meetings more regularly.

E. E. PARRISH, M.D., Secretary.

## ST. LOUIS COUNTY MEDICAL SOCIETY

The Society was called to order July 9, at 3:15 p. m., by the president, Dr. Horine Miles. Those present were: Drs. H. Miles, J. H. Sutter, J. H. Armstrong, C. A. P. Duunavant, W. H. Townsend, A. W. Westrup, A. Conway, S. H. Reynolds, R. H. Trumpour, F. Sandfos, M. Baker, P. M. Brossard and visitors: Drs. W. Belsey of Webster Groves and V. F. Townsend of Maplewood.

After disposing of the usual routine business the session was given up to hearing addresses from Drs. Belsey and Townsend who recently returned from France, giving their experiences in army work and describing conditions, the organization of medical, surgical and hygienic service, and methods of prevention and treatment. Their talks were extremely interesting and appreciated by all present.

ARTHUR CONWAY, M.D., Secretary.

## WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met at Ava, Mo., August 7, at 2 p. m., in the office of Dr. J. D. Ferguson. The following members were present: Drs. J. L. Gentry, R. M. Norman, J. D. Ferguson, A. C. Ames, R. M. Rogers, R. A. Ryan and J. A. Fuson.

Dr. Ferguson read a very interesting and instructive paper on "Uterine Hemorrhage," which was ably discussed by all present.

Dr. H. G. Frame not being present with his paper, it was decided that the society have a free-for-all discussion of the uses and abuses of pituitrin. This discussion seemed to be enjoyed by all present and was very instructive.

There being some members present that did not hear the paper by Dr. Rogers on "Medical Etiquette" at our last meeting, it was moved, seconded and unanimously voted to ask Dr. Rogers to again favor the society with his excellent paper on this subject. The doctor most cheerfully responded to the request.

The following resolution was presented by Dr. R. M. Rogers and unanimously passed:

WHEREAS, It is the duty of man to do good at all times, especially towards the household of the faithful, therefore be it

*Resolved*, That when any of our members shall be in distress of any kind, such as sickness among them or their families, it shall be the duty of each and every member to look well after such, and should death enter the home of any, that so nearly as possible the entire membership shall attend the funeral of such member or of his wife or child;

*Resolved*, That these resolutions be spread on the records of our Society.

There being no further business the society adjourned to meet the first Thursday in November, 1919, at Mansfield.

J. A. Fuson, M.D., Secretary.

# THE TRUTH ABOUT MEDICINES

## NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1919, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**CHLORCOSANE (MCNEIL).**—A brand of chlorcosane containing from 35 to 40 per cent. of chlorine in stable (nonactive) combination. (For a discussion of the properties and uses of chlorcosane see New and Nonofficial Remedies, 1919, p. 137.) Robert McNeil, Philadelphia.

**DICHLORAMINE-T (MCNEIL).**—A brand of dichloramine-T complying with the N. N. R. standards. (For a discussion of the actions, uses and dosage of dichloramine-T, see New and Nonofficial Remedies, 1919, p. 138.) Robert McNeil, Philadelphia.

**PITUITARY SOLUTION-ABBOTT.**—Liquor Hypophysis U. S. P. A sterilized solution of the water soluble extract of the posterior portion of the pituitary glands of cattle. It is standardized by the method of Roth. (For a discussion of the actions and uses of pituitary preparations, see New and Nonofficial Remedies, 1919, p. 204.) The Abbott Laboratories, Chicago.

**AMPULES PITUITARY SOLUTION-ABBOTT, 0.5 Cc.**—Each ampule contains 0.5 Cc. pituitary solution-Abbott. The Abbott Laboratories, Chicago.

**AMPULES PITUITARY SOLUTION-ABBOTT, 1 Cc.**—Each ampule contains 1 Cc. pituitary solution-Abbott. The Abbott Laboratories, Chicago.

**PITUITARY EXTRACT-LEDERLE.**—A sterile solution containing the active principles of posterior lobe of the pituitary body. It is standardized by the method of Roth and has the strength of Liquor Hypophysis, U. S. P. (For a discussion of the actions and uses of pituitary preparations, see New and Nonofficial Remedies, 1919, p. 204.) Lederle Antitoxin Laboratories, New York.

**AMPULES PITUITARY EXTRACT-LEDERLE, 0.5 Cc.**—Each ampule contains 0.5 Cc. pituitary extract-Lederle. Lederle Antitoxin Laboratories, New York.

**AMPULES PITUITARY EXTRACT-LEDERLE, 1 Cc.**—Each ampule contains 1 Cc. pituitary extract-Lederle. Lederle Antitoxin Laboratories, New York.

**ANTIDYSENTERIC SERUM (POLYVALENT)-LEDERLE.**—(For a description of Antidysenteric Serum, see New and Nonofficial Remedies, 1919, p. 269, and for Antidysenteric Serum-Lederle, see *The Journal A. M. A.*, April 14, 1919, p. 1136.) It is also marketed in syringes containing 50 Cc. each, with sterile needle. Lederle Antitoxin Laboratories, New York.

**STREPTOCOCCUS VACCINE (POLYVALENT)-LEDERLE.**—(For a description of Streptococcus Vaccine, see New and Nonofficial Remedies, 1919, p. 291 and for other Lederle preparations see *The Journal A. M. A.*, April 19, 1919, p. 1136.) It is also marketed in 10 Cc. and 20 Cc. vials; in packages of four 1-Cc. vials containing, respectively, 50, 100, 200 and 400 million killed streptococci; and in packages of four syringes containing, respectively, 50, 100, 200 and 400 million killed streptococci. Lederle Antitoxin Laboratories, New York (*Jour. A. M. A.*, July 5, 1919, p. 35).

**TUBERCULIN "O. T." (LEDERLE).**—Old Tuberculin (see New and Nonofficial Remedies, 1919, p. 277). Marketed in packages containing a stated amount of tuberculin and sufficient diluent to make 1 Cc. as follows: Dilution A containing 0.1 Cc., Dilution B containing 0.01 Cc., Dilution C containing 0.001 Cc., Dilution D containing 0.0001 Cc., Dilution E containing 0.00001 Cc., Dilution F containing 0.000001 Cc. Lederle Antitoxin Laboratories, New York.



**TUBERCULIN "B. E." (LEDERLE).**—In addition to the forms previously described, New Tuberculin "B. E." (see New and Nonofficial Remedies, 1919, p. 280 and N. N. R. supplement p. 10) is also marketed in packages containing a stated amount of tuberculin with sufficient diluent to make 1 Cc. as follows: Dilution A containing 0.1 Cc., Dilution B containing 0.01 Cc., Dilution C containing 0.001 Cc., Dilution D containing 0.0001 Cc., Dilution E containing 0.00001 Cc., Dilution F containing 0.000001 Cc. Lederle Antitoxin Laboratories, New York.

**TUBERCULIN "B. F." (LEDERLE).**—In addition to the forms previously described, Tuberculin "B. F." (see New and Nonofficial Remedies, 1919, p. 280 and N. N. R. supplement p. 10) is also marketed in packages containing a stated amount of tuberculin with sufficient diluent to make 1 Cc. as follows: Dilution A containing 0.1 Cc., Dilution B containing 0.01 Cc., Dilution C containing 0.001 Cc., Dilution D containing 0.0001 Cc., Dilution E containing 0.00001 Cc., Dilution F containing 0.000001 Cc. Lederle Antitoxin Laboratories, New York (*Jour. A. M. A.*, July 12, 1919, p. 105).

### PROPAGANDA FOR REFORM

**PARTOLA.**—A physician reports that a patient taking Partola as a blood purifier is now in a rundown condition with discoloration of the skin and a craving for the drug and that another patient took three tablets before going to bed, developed cramps and aborted the next day in her third month of pregnancy. Analysis indicated Partola to be tablets containing 2.64 grains phenolphthalein per tablet, sugar, starch and oil of peppermint (*Jour. A. M. A.*, July 5, 1919, p. 55).

**COMMERCIAL THERAPEUTICS.**—The Merrell Proteogens present another attempt to foist on the medical profession a series of essentially secret preparations whose therapeutic value has not been scientifically demonstrated. It is the old story of exploiting physicians through commercial pseudoscience, of trading on the credulity of the profession to the detriment of the public. Sir William Osler says the remedy against the commercial domination of therapeutics is obvious. "Give our students a first hand acquaintance with disease, and give them a thorough practical knowledge of the great drugs, and we will send out independent, clear-headed, cautious practitioners who will do their own thinking and be no longer at the mercy of the meretricious literature, which has sapped our independence." Excellent! But must humanity wait a generation? Why not stop this evil at once? The American Medical Association has provided the means whereby this may be done, if physicians will only make use of it—The Council on Pharmacy and Chemistry (*Jour. A. M. A.*, July 12, 1919, p. 109).

**TYREE'S ANTISEPTIC POWDER.**—An advertisement appearing in the *New York Medical Record* contains a bacteriologic report on Tyree's Antiseptic Powder by W. M. Gray, M.D., Microscopist, Army Medical Museum, and Pathologist to Providence Hospital. Every person who sees this advertisement and is not familiar with the facts will naturally suppose that this report, written on the stationery of the Surgeon-General's Office, War Department, is a recent report. As a matter of fact, the report was issued Jan. 3, 1890, nearly thirty years ago. Furthermore, the product that Dr. Gray examined was a different substance from the present Tyree's Antiseptic Powder. All these facts were brought out in *The Journal A. M. A.*, May 17, 1919, yet the *Medical Record* persists in publishing this inherently dishonest advertisement without explanations or apology (*Jour. A. M. A.*, July 12, 1919, p. 129).

**PROTECTING THE SICK SOLDIERS.**—The Council on Pharmacy and Chemistry, aided by the A. M. A. Chemical Laboratory, did a great work in investigating and passing on the many medicinal products offered to the Surgeon-General for the treatment of the sick soldiers in the hospitals and in the field. Fakes of every description were offered the government and it is a well known fact that no matter how fraudulent, how fakish, or how ridiculous the wares might be, their promoters were able to get political influence, even certain congressmen and senators being secured to help them. Automatically all medicinal preparations offered to the Surgeon-General were referred to the Council and thus many worthless preparations were barred from use by the government. It has been well said that our soldiers were better protected than our civilians; for while the government does not take any chances on the acceptance of useless if not worthless medicinal preparations, yet there are any number of doctors who fail to profit by the findings of the Council on Pharmacy and Chemistry (*Jour. Ind. State Med. Assn.*, July 15, 1919, p. 196).

**PROTEGENS OF THE WILLIAM S. MERRELL COMPANY.**—The Council on Pharmacy and Chemistry reports that Proteogen No. 1 (Plantex) for Cancer, Proteogen No. 2 for Rheumatism, Proteogen No. 3 for Tuberculosis, Proteogen No. 4 for Hay Fever and Bronchial Asthma, Proteogen No. 5 for Dermatitis, Proteogen No. 6 for Chlorosis, Proteogen No. 7 for Secondary Anemia, Proteogen No. 8 for Pernicious Anemia, Proteogen No. 9 for Goiter, Proteogen No. 10 for Syphilis, Proteogen No. 11 for Gonorrhea, and Proteogen No. 12 for Influenza and Pneumonia are inadmissible to New and Nonofficial Remedies because their composition is secret; because the therapeutic claims made for them are unwarranted; and because the secrecy and complexity of their composition make the use of these preparations irrational. The Proteogens are said to be prepared "under the personal supervision of the originator, Dr. A. S. Horowitz," who also originated Autolysin (an alleged cancer remedy, exploited some years ago). At one time the advertising for Proteogen No. 1 (Plantex) gave the impression that this was essentially the same as Autolysin. A study of the medical literature revealed no evidence establishing the value of the Proteogens; in fact, no evidence was found other than that appearing in the advertising matter of the manufacturer. The range of diseases in which Proteogens are recommended is so wide as to make obvious the lack of scientific judgment which characterizes their exploitation. Considering the grave nature of the diseases for which Proteogens are recommended, the want of a rational basis for the method of treatment and the general tenor of the advertising, it appears safe to conclude that these agents do not represent any definite advance in therapeutics (*Jour. A. M. A.*, July 12, 1919, p. 128).

**DR. DE SANCTIS' GOUT PILLS.**—The American agent for these pills is E. Fougera and Co., Inc. When examined in the A. M. A. Chemical Laboratory they were found to contain powdered colchicum seed, benzoic acid and milk sugar. There was also present fatty material which resembled the fat of colchicum seed, but might be in part added fatty acid. It was concluded that De Sanctis' pills are essentially 5 grain doses of colchicum seed. Here, then, we have sold for self-medication, an extremely poisonous drug with no warning of the risk the public runs in using it (*Jour. A. M. A.*, July 19, 1919, p. 213).

**DR. MILES' HEART TREATMENT.**—According to the Miles Medicine Company this is "a strengthening regulator and tonic for the weak heart." No information regarding the composition of Miles' Heart

Treatment is vouchsafed by the manufacturer beyond the statement of the alcohol content (11 per cent.) as required by the law. However, quotations in the advertising suggest that the preparation contains digitalis and cactus. To determine the presence or absence of digitalis in Miles' Heart Treatment, physiologic tests were made. The question as to the presence of cactus was not considered of interest because cactus grandiflorus has been shown to have no physiologic action. The physiologic tests indicated that there were no digitalis bodies present in the preparation (in amounts that could have any therapeutic effects) in doses containing enough alcohol to induce narcosis. Examination in the A. M. A. Chemical Laboratory showed Miles' Heart Treatment to be a solution of a compound or compounds of iron representing about 0.12 gm. metallic iron in 100 c.c. A solution of iron glycerophosphate in 10 per cent. alcohol, with about 5 per cent. glycerin, and a little sugar or glucose had much the same chemical properties as Miles' Heart Treatment (*Jour. A. M. A.*, July 26, 1919, p. 287).

"ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY."—The Council on Pharmacy and Chemistry of the A. M. A. is the department of our national organization that has not received the plaudits and encomiums of a widely joyous medical profession nor the grateful praises of the enthusiastic manufacturer of pharmaceutical articles. Perhaps the reason for this may be found in the character of its duties, for the Council must expose fraud, sometimes in high places, and protect the physician from being duped by avaricious persons and by persons who are themselves sometimes the victims of their own credulity. It thus happens that some proprietary article previously held in high esteem by the practitioner proves valueless, perhaps even fraudulent. The practitioner, however, may have credited much of his success in treating sick conditions to that preparation and the maker has had success in accumulating dollars from the sale, and both parties emit a loud and vicious roar against the Council because both lose money. Despite many obstacles the Council on Pharmacy and Chemistry has serenely pursued its allotted tasks and today stands as the only medium to which physicians may turn for information regarding proprietary articles. The words "accepted by the Council on Pharmacy and Chemistry of the American Medical Association" should be printed on the label and on all advertising circulars of proprietary articles that have been admitted to New and Nonofficial Remedies. Then, when pamphlets and circulars are received by physicians, they will read the statements of manufacturers with sympathetic understanding and with full confidence of their verity of declarations (*Jour. Mo. State Med. Assn.*, July, 1919, p. 223).

## BOOK REVIEWS

THE OPERATIONS OF OBSTETRICS. Embracing the Surgical Procedures and Management of the More Serious Complications. By Frederick Elmer Leavitt, M.D., formerly Assistant Professor of Obstetrics and Gynecology, University of Minnesota; Obstetrician to the St. Paul City and County Hospital, etc. With 248 illustrations. 466 pages. St. Louis: Mosby, 1919.

The exceedingly important subject of operative obstetrics has formerly been disposed of in the last chapter or two of textbooks on obstetrics but in this compact book for students and practitioners which is profusely illustrated, Leavitt gives these operative procedures the attention that they deserve. The chapter on induction of labor at term is particularly well written.

W. C. G.

A TEXTBOOK OF UROLOGY IN MEN, WOMEN AND CHILDREN. Including Urinary and Sexual Infections, Urethroscopy and Cystoscopy. By Victor Cox Pedersen, A.M., M.D., F.A.C.S., Major, Medical Corps, United States Army; Consulting Physician to the Selective Service Headquarters in the city of New York, etc. Illustrated with 362 engravings, of which 152 are original and 13 colored plates. Philadelphia and New York: Lea and Febiger, 1919. \$7.

If one can quarrel at all with Pedersen's new work on urology it would be with regard to its readability. From the standpoint of the urologist and of the student of urology it is by far one of the best works yet produced. For the beginner its mass of detail may prove bewildering yet this very detail is essential.

Practically two-thirds of the book is taken up by a consideration of gonorrhea, its complications and sequelae and the surgery of such complications and sequelae are exhaustively dealt with. Gonococcal infection in the female is given full consideration, a fact that distinguishes this work from similar works on urology. The book is further and gratifyingly distinguished by the absence of any consideration of syphilis except in its direct relation to urology per se.

All in all, the book is most refreshing in that passé procedures in urology are given no place. What one gets in the reading are well established and dependable facts free from cluttering theories. The book should be given a permanent place in the library of the urologist and in the teaching of urology.

E. G. M.

RULES FOR RECOVERY FROM PULMONARY TUBERCULOSIS. A Layman's Handbook of Treatment. By Lawrason Brown, M.D. Third Edition, thoroughly revised. Philadelphia and New York: Lea and Febiger, 1919. Price, \$1.50.

Lawrason Brown's position in the medical world would of itself demand that this brochure for patients be taken respectfully, but the perusal of book itself makes one wish that every incipient phthisiker should be made to study and recite on it. In fact it would do very well for a course in hygiene for every head of a family—both the pater familias as well as the mater. We might, however, call Dr. Brown's attention to the fact that Pike's Peak is over 14,000 feet high, instead of 10,000 (page 57).

G. H. H.

MILITARY SURGERY OF THE EAR, NOSE AND THROAT. By Hanau W. Loeb, M.D., Major, Medical Reserve Corps, U. S. A., St. Louis. Philadelphia and New York: Lea and Febiger, 1918. Price, \$1.25.

This small pocket edition volume of 148 pages is very ably written and collated. No attempt is made to give the fundamental principles of practice other than as directly connected with the topics discussed which are the injuries of the various anatomical structures in the regions of the ear, nose and throat. In addition, the author considers the correlated subjects of the psychoneuroses of hearing and speech which may arise in soldiers from shell shock. Careful attention is given to the functional paralyses which occur in these organs and also to reconstruction and re-education. The latter are especially important in view of the very numerous destructive wounds about the head.

The text includes sixteen chapters of which the last two are devoted to malingering and aviation tests of the ear (equilibration). About half of each chapter is devoted to comment on the bibliography which is very exhaustive. Credit is given to each writer by name. The complete data of 539 references to contributions to the literature of these subjects are given.

This tiny volume slips readily into a pocket and should be valuable to the workers in this field.

J. W. S.



**PSYCHOSES OF THE WAR, INCLUDING NEURASTHENIA AND SHELL SHOCK.** By H. C. Marr, Lieutenant-Colonel, R. A. M. C. (Temp.), M.D.; Fellow of the Royal Faculty of Physicians and Surgeons, Glasgow; Neurological Consultant to the Scottish Command, etc. London: Oxford University Press, Warwick Square, E. C.; American Branch, 35 West 32d Street, New York, 1919. Price, \$6.50.

This book very well illustrates the correctness of prevailing neurological opinion—that the psychoses of war are the psychoses of peace.

The separation in the title of neurasthenia and shell shock, and especially even the inclusion of the latter term, comes as a slight shock of a different quality to one who has followed the neuropsychiatric literature growing out of the war.

Perhaps the greatest attraction of the book is the method of presenting plates to illustrate facial expression in the varying types of mental and nervous disease. In the very hurried inspections incident to gathering a large army in a hurry we found in this country that we must key up our instinctive faculties and recognize mental disease and defect "on sight." Long and intimate contact with large groups served to enable one to pick them out with marvelous accuracy.

The classification of mental and nervous diseases is conventional and offers no special advantage over the widely accepted ones.

The tables at the end of the book, designed to cover all possible aspects of clinical, neurological, serological, and pathological examination, are elaborate and, used simply as a guide, would serve a useful purpose but available only in fully equipped and organized hospitals. Even then many blank spaces would be found in reports made on busy days when efforts to "help folks" outran scientific meticulousness.

M. A. B.

**THE ANATOMY OF THE PERIPHERAL NERVES.** By A. Melville Paterson, M.D., F.R.C.S., Lieutenant-Colonel, R. A. M. C.; Assistant Inspector of Special Military Surgical Hospitals, Professor of Anatomy in the University of Liverpool, etc. Cloth. Price, \$4.50. Pp. 165, with 64 illustrations. London: Oxford University Press, 1919. American Branch, 35 West Thirty-Second Street, New York.

This is an excellent little work on the peripheral nervous system. It is a complete and accurate compilation of anatomical facts relative to the peripheral nerves. The arrangement of the material is excellent, and the type is large and pleasing. There is a very complete index. Among the first pages of the book is a short description of the embryology or development of the peripheral nervous system. If the book had been made larger more space could have been devoted to the embryology. On page 92 are to be found several simple but effective sketches of the embryonic sympathetic cord. The illustrations are numerous and many of them are new and original. Particular attention might be called to the innervation of the muscles (pages 78, 79, 52 and 53) and the lumbosacral plexus of nerves on page 55. The entire book can be particularly recommended for the general practitioner.

A. L. S.

**PULMONARY TUBERCULOSIS.** By Maurice Fishberg, M.D., Clinical Professor of Medicine, New York University and Bellevue Hospital Medical College; Attending Physician, Montefiore Home and Hospital for Chronic Diseases, New York. Second Edition, Revised and Enlarged. Illustrated with 100 Engravings and 25 Plates. Philadelphia and New York: Lea and Febiger, 1919. Price, \$6.50.

This second edition contains about 100 more pages than the first one. Many sections have been re-

written with the result that the statements are more rounded out and considerate. Your reviewer was interested in noting the changes with reference to the work of Pottenger, who, in the meantime, has brought out a text of his own. Whereas in the first edition Pottenger's name was freely used, in the second the methods are merely named and the credit not insisted on.

The author's standpoint is still that of the physician practicing in New York City. The book is valuable as a contribution from such a source, but it should always be read with that localization in mind. It should be read therefore as a check to the texts of sanatorium physicians and to the contributions from the Middle West. For phthisis is essentially a social disease and its beginnings vary according to locality.

As the author states, the late war has tested out many of the procedures in the diagnosis and treatment of pulmonary tuberculosis. The writings of Colonel Bushnell seem better established than before. But we question rather the statement (page 7) "infection as a factor in phthisis genesis has been practically disregarded in the various armies." For, as far as the A. E. F. was concerned, great efforts were made to isolate phthisis. And harm did seem to have resulted from the neglect of such precautions.

The paper, printing, and binding of the volume are excellent.

G. H. H.

**NEOPLASTIC DISEASES. A Textbook on Tumors.** By James Ewing, M.D., Sc.D., Professor of Pathology at Cornell University Medical College, New York City. Octavo of 1027 pages, with 479 illustrations. Philadelphia: W. B. Saunders Company, 1919. Cloth, \$10 net.

On December 18 many years ago, while on a reconnoitering expedition, the reviewer discovered a pair of redtopped boots ensconced in the uppermost confines of the family wardrobe. The following week was spent in anxiously speculating on the relative ponderosity of anticipation and realization.

When I learned some years ago that Dr. Ewing was engaged in writing a book on tumors my mind experienced the emotions of long ago. In both these instances realization exceeded the most exaggerated anticipation. I outgrew the boots to a very amazing degree but that I shall outgrow the book seems unlikely, because it is much more than a book, it is a philosophic presentation of new growths. That this is so is at once apparent when one sees the title, "Neoplastic Diseases." We have become too thoroughly convinced that neoplasms are in the beginning local affairs and that all we need to do is to find the focus and the patient is well.

It is illuminating in this connection to read the chapter on lymphomas. It is quite possible that a more active prosecution of research along these lines might teach us much as to why our most perfectly planned and executed operations so regularly fail.

The author takes up his task by first discussing the general facts relating to tumors, such as metastasis, chemistry, etiology and the general morphology of tumors. He then discusses in the abstract each type of tumor. The most notable of these may be mentioned that on "Sarcomas of Bone and Bone-Marrow" and that already mentioned "Lymphoma and Lymphosarcoma." Following this is the regional consideration of tumors, covering some 500 pages. The presentation of these various sections is singularly full of facts of direct interest to the surgeon. For instance, to select one at random, in the chapter on "Cancer of the Uterus" he goes minutely into the relative frequency of glandular involvement and broad ligament infiltration. On

(Continued on adv. page xviii)

# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

Volume XVI

CHICAGO, ILL., AND ST. LOUIS, MO., OCTOBER, 1919

Number 10

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3529 Pine St., St. Louis, Mo.

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### ORIGINAL ARTICLES

#### FIBROID TUMORS WITH A SUGGESTION FOR THEIR CONTROL\*

H. E. PEARSE, M.D.  
KANSAS CITY, MO.

*Cause.*—The cause of fibroid tumors is practically unknown. Among the many ingenious theories that have been advanced to account for their growth, the most likely one is that of ovarian hyperactivity. I shall ask you to consider only this theory today, because it is the only theory as to their growth which offers us any rational means of applying remedies for the cure, and this entire paper is more concerned in the practical than in the theoretical study of fibroid tumors. Let us briefly study the action of the ovary.

It has two functions; two spheres of action which it exerts on the uterus. The first is a fluxionary one; the second is a trophic one. The fluxionary action of the ovary is that which determines the flow of blood to it. It has to do with the production of hyperemia, which nourishes the uterus during its growth and enables the uterus to perform the function of menstruation. It determines an increase in its blood supply several days before the woman menstruates, and maintains a steady pressure of blood through the uterus during its menstrual days.

The trophic influence of the ovary has to do with the growth of the uterus, with the growth of the breasts, and with the general perfection in growth and function of the entire genital system of the woman.

The conditions under which these organs grow if carried to undue limit would produce the very conditions which we find in fibroids; namely, an uncontrolled riot of tissue growth built into the shape of tumors and growing far beyond what it should grow. It is probable, then, that the trophic influence of the ovary has

much to do with the hypertrophic deposits which make up fibroid tumors. It is also probable that the fluxionary influence of the ovary has very much to do with the determination of the blood to the uterus which produces the symptomatology of fibroid tumors, much of which is pain and hemorrhage.

There are additional reasons for supposing that ovarian influence has much to do with the growth of fibroids, and it has to do with the functioning and the control of function of the uterus. 1. Fibroids cease to grow during the nursing period, just as menstruation ceases. 2. The removal of the ovary causes the shrinking of fibroids, just as it causes shrinking of the uterus, loss of the rugae of the vagina, loss of the pubic hair, and the general fading away of the lines that mark young womanhood, and bringing up the lines that mark old age. 3. Irradiation by roentgen ray or by radium has its effect on fibroids secondarily only to its effect on the ovary.

Again comes the fact that practically never do we find tumors growing in those periods of human life when the uterus is inactive. They begin about fifteen, when a woman begins to menstruate and from then on to fifty when she ceases; they multiply rapidly and after that time we do not find new ones starting. They seem to be connected with the functional activities of the uterus, and that depends for its life on the ovary. It is probable that the ill-directed action of the fluxionary influence of the ovary is responsible for the growth of fibroid tumors, by its direction of nutrition towards the uterus, by the unnatural loss of control of the nonfunctionating breast, and of the absence of the corpus luteum of pregnancy. The woman who has a free waist, and frequent child bearing periods, and long periods of relaxation, as a rule, does not suffer from fibroid tumors.

It will thus be seen that the conditions under which fibroids grow and produce trouble, and the conditions under which the normal functions of the uterus are carried out are identical, in nature varying only in degree. It therefore be-

\* Read by title at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



comes us next to study the causes which naturally operate to inhibit unnatural and improper influence of the ovary.

The inhibition of the ovarian action is brought about by the influence of the female breast. While the woman nurses her baby the internal secretion of the mammary gland stops her menstruation and stops uterine growth and activity.

*Treatment.*—Let us take up at once the treatment of fibroid tumors. When to treat them, how to treat them, and when to cease treating them, and remove them by surgical operation.

The treatment of fibroid tumors is as follows:

1. No treatment at all.
2. Palliative treatment, or medical treatment.
3. The removal of the tumor from the uterus, leaving the uterus itself intact and ready to functionate.
4. Removal of the entire uterus, or the radical hysterectomy. This is divided into two classes, the supravaginal hysterectomy which leaves the cervix and the panhysterectomy which takes cervix and all.

So we range in the treatment from nothing at all to the total destruction of the genital organs of the woman.

1. As to those who require no treatment. The small tumor discovered by accident, producing no symptoms, does not require any attention at the hands of the doctor. It should be let alone, and the woman advised to disregard it entirely. She should, however, report to her physician occasionally the nature of her menstrual periods and the presence of any unusual symptoms of pain which she may feel. An exception to this are cervical fibroids. When a fibroid as large as a marble burroughs itself into the cervix it is best removed at once by a vaginal incision, as the tendency of these tumors is to grow more rapidly and at the same time to more seriously block the actions and functions of the uterus.

2. The palliative treatment. This is hygienic, and consists in avoiding sexual excitement, in leading a normal sexual life, in quiet and rest at the time of her menstrual periods, in the taking of tonics between her menstrual periods. Whenever the flow is excessive she should take such medicine as her doctor shall prescribe. These are:

1. Ergot. The extract of ergot or ergotine, given in 1 to 3 grain doses two or three times a day.

2. Hydrastus. The well known effect of hydrastus on uterine hemorrhage requires no strengthening at my hands.

3. Cannabis indica for various types of nervousness. It may be combined with the ergot, and with the hydrastus. Nux vomica as a tonic

may be added, whether to all of the above or to any one of them. When, however, the flow needs quick control, it is found that stypticine, and sometimes obstetric pituitrin hypodermically, furnishes the acme of the astringent medication.

Here let us go back to the first part of our story in which we talked about the ovarian influence. Let us remember that the mammary gland has to do with the cessation of function of the ovaries, and consequently stops the fluxionary action of the ovary on the uterus. Let us give this woman, then, from 10 to 15 or 16 grains of mammary extract four times a day. Under its influence you will see most remarkable changes in the hemorrhage of fibroid. You will see it get better beyond anything that ergot and hydrastus can do for you. But the mammary extract must be reliable and fresh and I leave it to you to find from your manufacturer these products. They are difficult to obtain.

The treatment of fibroid tumors by mammary extract and by thyroid extract is not new. The use of thyroid extract rests on no firmer basis than the fact that the ovarian activity is called into play by the thyroid. Consequently, in any case where ovarian activity is needed, or where ovarian inhibition is desired, the products of the thyroid are occasionally advantageous. The literature is full of cases in which fleshy women having fibroids were given thyroid extract to reduce their obesity and the fibroids disappeared. The treatment, however, depends on the influence of the thyroid on the ovary and the breast, which we are studying and is therefore not mentioned further in this paper.

The application of mammary extract to the treatment of fibroids was written on by Dr. Robert Bell of Glasgow, Scotland, before the British Gynecological Association in 1896. A paper followed by John B. Shobar of Philadelphia, in 1898; by J. G. Clark of Philadelphia, in 1899; by H. W. Crouse, in 1902. It was taken up then by men across the ocean favorably commenting on the action of this substance in the reduction of the size, and the symptomatology of growing fibroids in young women. None of them pretend to cure fibroids that have reached great size. None of them pretend to have much of any influence on fibroids that have pedicles and have been driven out of the muscular tissue into the peritoneum. None of them pretend that the remedy is a cure, but all of them use it for the hemorrhages of fibroids and to produce a cessation in their size.

It may be mentioned by the way that the control of uterine hemorrhage is not restricted to fibroids; that the administration of mammary extract has a beneficial effect on the excessive flow accompanying many of the inflammatory conditions of the uterus. Why it has not be-

come more popular is not hard to understand. The excessive strides of surgery, as we surgeons have perfected our technic in hysterectomy, has given us an appetite for hysterectomies. We usually consider nothing else. The presence of a fibroid justifies a hysterectomy, and every hospital has in its laboratory many specimens every year of uteri from 3 to 4 inches long containing a fibroid tumor near its fundus, as large as a marble, removed by hysterectomy when the fibroid was discovered; a totally useless destruction of the woman's genital apparatus. A proper application of the principles laid down in this paper, would have resulted in the saving of the woman's uterus and in the retention of her child-bearing possibilities.

It is on this account that such emphasis is given to the treatment of fibroid tumors by the feeding of mammary extract, and the administration of hygienic measures.

When should we give this palliative and medical treatment for the fibroid?

1. When it is a slight tumor, when it is not causing much inconvenience, when the woman for twenty-eight days out of thirty is able to take care of her work, and excessive flow only holds her back.

2. When she comes to us a seriously sick woman, but too weak for serous operation. This will be indicated by hemoglobin below 50 per cent., by a red blood count below 3,000,000 red cells to the cubic millimeter.

3. The presence of some serious disease elsewhere. There is no use removing a fibroid from a consumptive. There is no use removing a fibroid from a woman who has a cancer of the breast.

4. Those valuable women who refuse operation. We can not turn our backs on the woman who declines to submit herself to a surgical operation in the present day when surgery is so mutilating, and when it cures, so seldom leaves perfect function. The woman who refuses operation must be backed up by her physician and her surgeon, as far as possible. She must be watched and guarded and helped by every medical means and hygienic means in our power, and at the same time her confidence must be built up until when the supreme test comes that she must lose her life or take a surgical operation in the hope of saving it, she will then trust herself in the hands of her surgeon and her physician with that implicit confidence which will do much toward making the surgical venture a success.

Let us now sharply differentiate the different operative procedures necessary to a fibroid tumor when we have decided that palliative treatment is no longer indicated. We will first ascertain the location of the fibroid, if it be in

the fundus, or if it be in the cervix, or if it be in the broad ligament. We will next examine the condition of the cervix, and the condition of the uterine cavity. If the fibroid lies up in the fundus there is no occasion to remove the uterus even though the fibroid be multiple. Through one, or two, or three incisions the tumors should be carefully shelled from their bed, the hemorrhage checked, and the wound sutured. This is the operation of myomectomy, and is the operation of choice. Endless numbers of cases could be quoted showing the removal of tumor by myomectomy leaving the woman in a child-bearing condition in which not only no bad results have followed, but in which such excellent results have followed as to convert any woman to the value of myomectomy.

There is no doubt but what the death rate is slightly higher in myomectomy in the hands of a surgeon who is at all inclined to be rapid on his work, or careless in his technic. The difference, however, is slight. There is also no doubt of the fact that there are a larger number of cases of thrombosis of the ovarian veins and thrombosis of the veins of the leg after extensive myomectomy is done than after hysterectomy. From the surgeon's standpoint a complete panhysterectomy or possibly a supravaginal hysterectomy is the easiest thing in the world to do, and obtains the quickest results for the patient. It is the easiest thing for the patient to recover from, but it is bitterly and severely the worst thing that can befall a woman herself. The doctor is through with his successful work, and has his successful result tabulated in the course of three weeks. The woman drags out her existence without any genital apparatus whatever, for twenty to thirty to forty years. The balance in favor of the doctor and against the woman is too large. Wherever possible the functioning uterus should be left, and the slight additional chances which the woman is compelled to take should be offset by the dainty, patient skill of a careful operator who does the myomectomy properly.

Myomectomy is not indicated in tumors that involve the cervix, or grow under the bladder; usually is not indicated in tumors that extensively split up the broad ligaments. In such cases hysterectomy is usually required. This hysterectomy should be supravaginal when the cervix and tissues around the cervix and the uterine cavity are in normal condition. However, if the cervix has been severely lacerated or there has recently been infection of the uterine cavity, a panhysterectomy should be done. These lines therefore should be sharply followed:

1. A myomectomy where the tumors are in the fundus.



2. A supravaginal hysterectomy where the age of the patient or the condition of the uterus does not warrant a possibility of child-bearing.

3. A panhysterectomy where the involvement of the cervical tissue by tumor growth, or its laceration, or its severe infection, endangers the life of the patient, if it is left.

I hope I have succeeded in making sharp and clear the lines along which no treatment at all shall be given to a fibroma, along which medical and palliative treatment shall be given, and lines along which surgical treatment shall be given. If these lines are honestly followed, I am sure that a very large majority of the fibroids will never be operated on, and the women who carry them will be as happy and as well-to-do, and as safe from death as those who do not carry them.

Rialto Building.

#### CONDITIONS OTHER THAN LUES GIVING POSITIVE WASSERMANN\*

M. O. BIGGS, M.D.

Superintendent State Hospital No. 1

FULTON, MO.

We began doing Wassermann on all patients in State Hospital No. 1, Fulton, Mo., as a routine measure about four years ago and during that time our attention has been drawn to the large percentage of hyperthyroid cases giving a positive Wassermann in which we were unable either from clinical history, physical examination or inquiry into the family records, to establish any syphilitic infection or taint.

It is a well known fact that goiter is much more prevalent among women than men, and our experience has been no exception to the rule. The patients of whom we shall speak are insane, with two exceptions, and have been diagnosed under the head of thyroigenous psychosis, all of whom became unmanageable to a greater or less degree at their respective homes, necessitating their confinement in an institution for the insane.

The psychosis of each, in the main, is characterized by wild delusions, irritability which sometimes develops into acute excitement, slow speech and deliberate mentation, absence of suicidal or homicidal tendencies, lassitude and indifference to surroundings, and apparent feeble-mindedness in some. We find in these cases a total lack of the symptoms which are manifested in a psychosis which results from luetic infection, either acquired or inherited.

The physical signs are such as one would find in the average case of this type. In most of the cases an exophthalmic state was found to exist

with marked tachycardia and other symptoms which accompany conditions of this kind. In some of the cases the enlargement is more lateral and varies in size to a great extent. The changes in the skin, teeth, blood, and temperature of the body are typical of this class of cases. The number of thyroigenous cases to which I wish to call your attention is twelve: all these cases are positive Wassermann.

The prevailing mental tone associated with the disease is fear and apprehension, frequently associated with hallucinations of hearing and vision; voices may be heard saying disagreeable things and with these hallucinations occur anxious and agitated states. A few cases of acute thyroidism, with active delirium, are occasionally seen following operations on the gland, and may be due to the expression of its secretions by handling it and subsequent absorption.

A brief case history of each patient is given as follows:

CASE 1.—Mrs. R. R., No. 8133, admitted to the hospital Jan. 5, 1904, aged 51, married, four children. Medium size goiter in median line. Skin sallow, pulse at rest 104, after exercise 120. Eyes react to light and accommodation. Romberg sign negative. Knee reflexes normal. Blood Wassermann strongly positive.

CASE 2.—Mrs. A. K. C., No. 11315, admitted to hospital July 4, 1916, aged 49, married, two children. Very large goiter, more prominent on right side. Easily excited and very delusional. Pulse at rest 80, after exercise 104. Blood pressure systolic 170, diastolic 118. Pupils reflexes normal. Romberg sign negative. Knee reflexes normal. Slight tremor of fingers. Blood Wassermann strongly positive.

CASE 3.—Mrs. M. M., No. 11680, admitted to hospital June 1, 1917, aged 35. Neurological examination was negative. Blood Wassermann slightly positive. Discharged from hospital Aug. 31, 1918, very much improved.

CASE 4.—Mrs. P. D., No. 11814, admitted to hospital Sept. 30, 1917, aged about 50, single. Patient had a very large exophthalmic goiter, pronounced tachycardia, Von Graef and Steelwag signs both positive, eye and knee reflexes negative, blood and spinal Wassermann both positive. Patient died June 23, 1918, of myocarditis.

CASE 5.—Mrs. R. B., No. 12098, admitted Aug. 22, 1918, aged 38. Date of first attack fourteen years ago. Father insane. Von Graefe and Steelwag signs negative. Pulse at rest 88, after exercise 104. Pupils react to light and accommodation. Romberg signs negative, knee reflexes slightly exaggerated, slight tremor of face and extended fingers. Blood Wassermann strongly positive. Large lateral goiter, more pronounced on right side, voice much affected by pressure.

CASE 6.—Mrs. F. G., No. 12179, aged 20, admitted to hospital Dec. 6, 1918, married, no children. First attack Dec. 2, 1918. Maternal aunt insane. Goiter enlarged on both sides, pupils react to light and accommodation, tremor of extended fingers, knee reflexes, left knee normal, right knee reflexes exaggerated. Pulse at rest 98, after exercise 120. Blood Wassermann strongly positive.

CASE 7.—Mrs. M. K., No. 12161, admitted Nov. 19, 1918, aged 80, widow, one child. Goiter present since early womanhood. Romberg negative, Steelwag nega-

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.

tive, Von Graefe negative. Pulse at rest 86, after exercise 104, rather pronounced tachycardia, marked tremor of facial muscles and extended fingers. Large goiter in median line and right side. Pupils react to light and accommodation, knee reflexes normal, blood Wassermann positive.

CASE 8.—Mrs. M. W., No. 12120, admitted Sept. 20, 1918, aged 27, never married, two children. Family history negative. Pulse at rest 84, after exercise 100, pupils react to light and accommodation, no tremors. Von Graefe and Steelwag negative, knee reflexes normal, Romberg negative, blood Wassermann strongly positive.

CASE 9.—Mrs. F. J., No. 12208, admitted Jan. 9, 1919, aged 78, married, one child. Exophthalmic goiter, very large, especially so on left side. Von Graefe and Steelwag positive, Romberg negative, tachycardia very pronounced, marked tremor of extended fingers. Pupils very sluggish, knee reflexes about normal.

CASE 10.—Mrs. D. D., admitted Sept. 7, 1918, aged 46, married, two children. Date of present attack Dec. 26, 1917, following influenza. One maternal aunt and two cousins insane. Pulse at rest 80, after exercise 120, pupils react to light and accommodation. Romberg negative, slight tremor of fingers. Von Graefe slightly positive, Wassermann strongly positive. Exophthalmic goiter very large in median line protruding to right side. Knee reflexes exaggerated.

CASE 11.—Mrs. O., aged about 53, not insane. Large exophthalmic goiter twenty-five years standing, much impairment of speech. Von Graefe positive, Steelwag positive, Romberg negative, knee reflexes exaggerated. Tachycardia very pronounced, blood Wassermann positive. Submitted to operation, ligation, then removal of the thyroid. Twelve months afterwards voice restored, blood Wassermann negative (after operation), marked improvement in pulse and general health.

CASE 12.—Mrs. T., aged 27, two children, not insane. Very large goiter. Tachycardia and extremely nervous, submitted to operation. Blood Wassermann (eighteen months after operation) was negative. Patient apparently restored.

In the last two cases reported, I am sorry to say, we did not make Wassermann tests before the operation, there being no evidence of lues. My attention had not been directed to the numerous positive Wassermann's in this kind of work at that time. They were not insane, and came under my observation as employees. Operation was advised and in both cases recovery was complete.

The ten other cases spoken of are thyrogenous psychoses, badly disturbed most of the time. No operative measures have been attempted owing to the difficulty of managing insane people after operations of this kind. However, it is my belief that these cases should be given the chance for improvement by operative measures, regardless of the mental state. Medicinal medication is of no value in these cases.

I am sorry I cannot report on the spinal Wassermann findings of all these cases but owing to so many changes in the last year in the personnel of our staff we have not been able to carry these findings to the fullest extent. Later

on we expect to follow these cases with other blood and spinal Wassermanns.

The method used at the institution is the Noguchi drop method, and the work was carried out in the state hospital laboratory. We have every reason to believe that the findings are as accurate as could be expected, for we have taken pains to have these findings corroborated in other laboratories, and in every instance the other pathologists have agreed with our findings.

In summing up results of the Wassermann reaction workers in serology differ somewhat in the interpretation of their findings. The peculiar complex nature of the test itself is naturally responsible for some diversity of viewpoint.

The entire reaction depends on mixing of a given antigen with its homologous, inactive immune serum, and complement. If the complement is bound or deviated, no hemolysis occurs as no complement remains to complete the hemolytic reaction. (Positive interpretation.)

When the complement is not deviated, hemolysis takes place and serves as a proof that serum added to the antigen was not of homologous nature. (Negative interpretation.) This proves the existence of an amboceptor that may fit a given known antigen. We find this affinity existing in the positive phase in our thyrogenous cases as well as in our luetic cases.

Other serologists have reported positive results in cases of scarlatina, leprosy and sleeping sickness and our reports on the thyrogenous cases tend to prove the presence in the blood of these patients of a similar complement binding substance.

Whether the phenomenon of complement deviation is due to changes in the chemical molecular relationship or to a physicochemical reaction on the colloid molecule is at this time unknown to the scientific investigator. Our results are interesting and new to us and we hope may shed some light on this most complex subject of serology.

#### DISCUSSION

DR. A. L. SKOOG, Kansas City: This is a very important subject and one that may be discussed from different angles. I particularly wish to dwell on the side touched on by Dr. Trimble's paper, namely, the immunity established in the individual or already present, without the use of any outside chemicals. I have been struck with this problem for some time. I have seen a number of cases where I thought there certainly must have been some natural immunity present or established immediately after the infection took place. This is very valuable from the neurological side of the problem, where this occurs in families or in one individual, and where there is great likelihood of infection being transmitted to other members of the family. I can recall a number of families, but especially two; one in which the husband was perfectly well, as fine a type as you could wish to see. He absolutely denied luetic infection, although the youth of the family undoubtedly had syphilis of a hereditary nature, and which responded to treatment, that is improved, and I believe we might say clinically cured.



In this family there was the wife, the father and another child. The child was perfectly healthy and gave negative tests for syphilis; the mother was highly nervous and I suspected lues, but she was negative; the father was perfectly healthy and gave an absolutely positive Wassermann. He naturally asked the question: What shall I do? I told him to bear in mind what this test meant, and to just take care of his health, not take any treatment, but to always bear it in mind in any illness, even minor.

Another case, the wife died from syphilis and the husband was addicted to alcohol, and I suspected he had lues at that time, but he was negative even in the spinal fluid. This individual was probably one of those that are more or less immune.

The problem arises whether such patients still harbor the *spirochaeta pallida* well concealed in some remote tissues.

I wish to emphasize Dr. Trimble's paper that it is extremely important to remember that when we are dealing with a case of syphilis we are dealing with a disease in which we may expect a certain amount of cooperation and immunity from the individual without any outside treatment.

DR. R. B. H. GRADWOHL, St. Louis: There is no dispute, I believe, on the part of the syphilographer as to the factor of the individual in the treatment of this disease. I think that mistake has been made in the treatment of syphilis, that standard methods have been attempted to be formulated, forgetting the individual as well as the disease. However, these exceptions should not deter us from trying to follow out as intensive a plan of treatment as we can primarily for the majority of individuals.

So far as the cure of syphilis is concerned, perhaps we are no better off than we were when Fournier said: "If you want to know whether a man is cured of syphilis, have him come back in twenty-five years." When we have used any one of these standard methods for twenty-five years we might come to some conclusion on that point. At the same time I do not share in Dr. Trimble's evident pessimism on this question.

So far as the second paper is concerned, I wish to say at the outset that I have been following the Wassermann work ever since it was brought out. In the early days reports were very common as to finding positive Wassermans in conditions other than syphilis. Every few weeks scarlet fever or malaria. I believe it is now accepted that these early results were due to errors in technic and to the fact that in those days the Wassermann tests were not standardized. In my experience the Wassermann using all the different forms that have ever been used, I have never seen a Wassermann positive in any disease other than syphilis, except leprosy. I have never had an opportunity to handle any sera from yaws, the tropical disease, which we are told gives a positive reaction. I do not wish to imply that Dr. Biggs' results are incorrect, but I wish to state that it is my opinion that the Wassermann is not positive in any other disease. I regret that he did not have spinal fluid reactions in these cases, and also that they were not handled by antisyphilitic treatment for the purpose of proving whether or not the treatment would have any effect on the reaction. In other words, while I do not wish to state his technic was incorrect, I am not ready to believe that any condition outside of syphilis, leprosy or yaws, will give a positive Wassermann. It would also have been well to have performed serial Wassermans on these cases. Altogether the number of cases presented do not justify the conclusions reached by the essayist.

DR. C. R. WOODSON, St. Joseph: I have had to do largely with the late phase of syphilis. I find symptoms develop late less frequently when the patient

has been treated well and long. The individual who takes good care of himself does have late manifestations much less than the individual who has all the conditions that follow syphilis.

I had a case twenty-five years ago that came with all the marks of acute cerebral syphilis. I gave him 10 grains of blue mass for two or three nights, I gave him 1,000 grains of the iodids a day, and he made a recovery and is well yet. A few years ago a patient was referred to me suffering from syphilitic psychosis, in fact, he had run the family out of the house with a hammer, and was brought to me perfectly wild. I gave him 10 grains of blue mass and 60 grains of sodium iodid. The next morning he was quiet, his fever had subsided. I continued the iodids in this case up to 350 or 400 grains. He made a complete recovery, and that was ten years ago.

Recently a man came to me with a severe melancholia due to lues. I placed him on the iodids. We had a Wassermann made and found it positive. Gave him neosalvarsan, mercury, and used less iodids than in the other case, and he made an uneventful recovery. A man came to me less than a week ago with a primary recent lesion, he thought. I referred him to a competent pathologist who made a Wassermann and examined the cerebrospinal fluid and found it negative. He examined the blood from the arm and found it positive. I turned him over to a syphilographer and I understand he is doing well. But the cases that receive treatment for a long time and thorough treatment, while they are well, return occasionally to take some additional treatment.

One patient with Graves' disease came to me who had been to a number of physicians and been diagnosed as tuberculosis, and typhoid fever. She was depressed and had a temperature all the time, with pronounced tachycardia. It was extremely hot weather. I took a sheet out of cold water and had her lie down on it and turned the other side over her, turnover pie style. We kept that wet all the time. I gave her hypobromid of quinin, glycerin, phosphates and some other things, but the principle thing was rest in bed and the water night and day and the constant attention of a nurse. She made an uneventful recovery in six weeks time and has remained well.

DR. M. F. ENGMAN, St. Louis: It is very refreshing to hear a paper such as that presented by Dr. Trimble; one which points out to us a fact, and it is a salient fact, in his argument that we do not know all about a certain disease. I think all that have had a great deal to do with the treatment of syphilis realize that at present it is rather inadequate, in that it does not cure all cases. Columbus brought back to Europe in 1493 his little token from the New World of a new disease—syphilis. Since that time the world has gone on, the race has gone forward, and even today, in spite of the ravages of that disease and our inadequate knowledge of its proper treatment, we are able to cross the ocean in twenty-six hours. In other words, evolution has gone on in spite of syphilis, therefore we must admit that nature itself has been the wisest and best doctor in handling this malady.

At the present day we look on syphilis as a great affliction, and it is a great menace to the human race, but nature has its laws and its methods of handling it as it has other diseases, otherwise the race would be extinct.

Salvarsan does not cure syphilis. The world at first thought it would. The difference in the behavior of diseases to this and other drugs is properly explained by the fact that the *spirochaeta pallida* runs in strains. Some strains are curable and amenable to treatment, some enter the host and die in a few months or remain innocuous while other strains remain alive as long as the individual lives and possibly

after his death for some hours. Some are absolutely resistant to treatment and invaded all of the tissues of the host at different intervals and are affected very little by salvarsan or mercury. We are great creatures of habit and the medical world largely runs to fads and some great author enunciates certain dicta and we blindly follow him. We follow serological reports and believe in them dogmatically. We are apt to place absolute faith in a Wassermann reaction, for instance, believing one man cured when he receives a series of negatives, another man hopelessly incurable when he receives a series of positive reactions. We must not place too much faith on the Wassermann reaction. It is a great assistance and gives us an insight into the condition or the relationship between the host and the parasite, but it is not the whole story; in fact, I do not place dogmatic faith in the Wassermann reaction, but simply use it as a guide in treatment. I do not know that the majority of specialists are more competent to treat syphilis than a general practitioner with good common sense. Some specialists are apt to shoot in one dose of salvarsan after another striving for a negative Wassermann reaction. In the last issue of *The Journal of the American Medical Association* Dr. Udo Wile of the University of Michigan, who has been one of our most accurate laboratory workers on syphilis, says that salvarsan has not a leg to stand on in those cases where you have latent syphilis and a positive reaction.

I believe this whole matter should be looked on with common sense. We have no specific for syphilis. McDonough of England believes that the extremely intensive treatment with salvarsan, pumping in dose after dose to obtain a negative Wassermann, depresses the resisting functions of the meninges so that paresis frequently supervenes after such treatment. Salvarsan is a great drug, but the greatest of these is mercury, not poured in by the quart but given in common sense doses.

I do feel, of course, that the greatest chance to cure syphilis is in the early stages. If the patient is invaded by a mild strain of the organism, he is easily cured by several doses of salvarsan. If an intensive or a resisting strain is encountered, the patient will not be cured by salvarsan and we may give him too much salvarsan so that the natural resisting functions of his body are crippled by its excessive administration and we, therefore, do more harm than good in giving intensive treatment.

Because a man has live spirochaeta in his body does not mean that he will die of syphilis, and Wassermann reaction taken on 1,000 men past 60 would be interesting. Because one has a positive Wassermann reaction does not mean that he will have cerebral or cardiac syphilis. I do not believe in this pessimistic stand in regard to syphilis. But it is important to remember that syphilis is a disease in which our remedies may cure or destroy the disease, or in other instances assist the parasite in destroying the host.

DR. WILLIAM FRICK, Kansas City: I want to commend what Dr. Engman has said. There is a difference in the attitude of the dermatologist, the laboratory worker and the neurologist. I think that is probably because of the cases that come before us. The neurologist and the laboratory man very likely get hold of the latent, old cases of syphilis, those that have gone beyond the period when it can be readily cured. The dermatologist more often gets the more recent cases, and perhaps those that have a strain of spirochaete pallida that does not affect the nervous system. I think there is where we find part of our differences in cases of syphilis.

I was glad to hear Dr. Trimble's paper. I know he has done a lot of valuable work in this direction, but I think he has, on account of the character of cases

that have come to him, gotten rather a pessimistic view of the subject.

I want to ask why we should not regard a case as cured such as this: Eighteen or twenty years ago I had a young business man with syphilis, all the characteristics of the early stage; no question at all of having the disease. He was treated by the old mercurial form of treatment; he was treated carefully, not intensively, but as I considered, a common sense form of treatment, for about two and a half years. We did not have the Wassermann then; we did not have salvarsan then. I do not undervalue salvarsan but I think the mercurial treatment is still better. After a period of years—probably eighteen—he applied for life insurance. He truthfully said he had had this disease, so the insurance company required a Wassermann to be made, and it proved to be negative. In the meantime that man had married and has a family of three children who are all healthy. There has been no Wassermann made on these children, but they have every indication of being normal, healthy children, with no stigma of syphilis. His wife is well, he is well, and no one can say he is at all inferior in his general health and constitutional condition. Now, after that length of time, with a negative Wassermann, with the clean health of the man and of his family, why should we not consider that case cured? I think we do have quite a good many cures of syphilis, in spite of the pessimistic attitude of some of the neurologists and others.

#### THE INTERRUPTION OF PREGNANCY AT TERM\*

W. H. VOGT, M.D.  
ST. LOUIS

In all branches of medicine great advances have been made in the past years and the general practitioner has kept up with this progress fairly well. He recognizes the need for early surgical interference in certain cases which some years ago escaped his observation, and sees that the patient gets the proper surgical care. He recognizes the need for early intervention in cases of perforation of the duodenum or stomach from ulcer, he is awake to the necessity of early operative interference in ruptured ectopic pregnancy, he realizes that patients seen early with acute appendicitis have the best chance for recovery when operated early, etc.

In obstetrics, too, great progress has been made, but here the man in general practice, strange to say, has not kept pace with the rapidly new developing methods. The field of obstetrics has always been treated by him like a step-child, he has accepted obstetric cases merely as a means of finally obtaining the family practice. Then, too, one only too often sees the modern things in obstetrics published only in special journals where they are safely hidden from view for the man in general practice, and the result is that his obstetric cases are handled in the same manner that he was taught perhaps ten or twenty years ago.

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



We have for a long time attempted to make labor easier for the mother by the use of anesthetics, first chloroform, then ether, then nitrous oxid gas and finally morphin scopolamine analgesia was made use of. All these methods have their value. We have watched the function of the mother's organs carefully through her pregnancy, in order to prevent any ill results to her in the end, but in our careful observations of the mother we only too often forget about the fetus, and have been facing a great number of fetal deaths, I shall not say an increasing number, but the fetal mortality has certainly not been reduced as I believe it could or can be if proper methods are adopted.

In saying this, however, I do not want to belittle the efforts that are being made to save the mother or efforts to bring about a state of health in the mother after confinement as nearly normal as possible, for we will all agree that after all, the mother is the most important consideration; yet I do believe that we should improve the state of conditions existing regarding the large fetal mortality. Statistics show that out of 100 babies born, from four to six die during labor or within a short time thereafter in consequence of the event. Various factors contribute to this result. Some die from maternal and some from fetal diseases, as syphilis or hemophilia, cerebral injury or pneumonia, but excluding these, we may safely assert that asphyxia is the form of death that obtains in most cases. Why this large number of asphyxia cases? Charles B. Reed has shown in his study of fetal death during labor that as soon as the membranes rupture the uterus diminishes in size, the contractions of the uterus become harder and more frequent while the gas exchange between mother and fetus becomes greatly restricted, and as the pains become more frequent the intervals between pains become shorter, and the danger for the child increases. He also cites Schultze, who claims that the intra-uterine pressure increases after the rupture of the membranes, following this a change of blood results and oxygen starvation begins in the fetal blood while retention of carbon dioxid increases. Compression of the cord or of the placenta or its soft site may take place, and results fatally for the fetus.

We know that long labor can be expected in contracted pelvis, or in old primiparas, where not only the condition of the pelvis, but that of the soft parts may contribute greatly to the prolongation of labor. We too often with fear overestimate the dangers to the mother and minimize the danger to the fetus. The danger in these cases is due to the prolonged second stage, and the fetal mortality has been shown to be quite high in these cases. Statistics show that three times as many still births occur among

primiparas as among multiparas. It is interesting to note the experience of Veit, who, in a series of 2,550 cases of head presentations, found that in labors which lasted two hours the percentage of asphyxia was 18.35, while 1.7 per cent. were stillborn and 5.5 per cent. died later. In the cases lasting four hours the percentage suddenly went to 49.65 asphyxiated, 5.59 per cent. were stillborn and 6.22 per cent. died during the next few days. This, then, shows that prolongation of labor with its accompanying pressure on the fetal skull, often producing paralysis of the respiratory centers is responsible for a large number of cases of asphyxia and death of the fetus. Prolonged labor usually means difficult labor, and difficult labor often means difficult instrumental delivery, with a longer or shorter period of anesthesia.

It is perhaps unnecessary to call your attention to the damage done by instruments in many cases and also the danger of prolonged anesthesia. Any anesthetic, whether it be chloroform, ether, gas or morphin scopolamine narcosis, can be given safely for a short period of time, and only during the time of actual pains, but when given over a long period of time, adds greatly to the dangers of asphyxia and death of the fetus. This, then, leads us to the question of not only making labor easier for the mother, but likewise easier for the unborn fetus by shortening the duration of labor and attempting to prevent difficult instrumental deliveries with all their dangers and prolonged anesthetics. How can this be done?

The usefulness of pelvic measurements, I am sure, is today generally accepted, but the attempt to estimate the size of the child has not been practiced carefully until recently, although we have had at least one very satisfactory method of doing this for some time. It is of little value to know that the pelvis of a woman is normal in all its measurements and have no knowledge of the size of the child. We must know whether a disproportion exists between the size of the child and that of the pelvis, or all pelvic measurements will be of no value. Since human gestation may vary from 240 to 336 days, yet the child be fully matured at 275 days, it is essential to know when labor should occur. We have always assumed that a mature child is 50 cm. long and weighs from 5 to 8 pounds, and if we believe the statement of von Winckel, the child of over 8 pounds is over-matured in about 70 per cent. of all cases. Von Winckel also shows that the continued growth of the fetus in the mother progresses very rapidly, and increases the danger to both mother and child by increasing the operative complications and the prolongation of labor. It is therefore not a matter of indifference when labor should start, and I believe that by the simple methods

that some obstetricians have adopted today the maturity of the child can be fairly accurately determined, and if determined, the course of pregnancy and labor can be regulated. The subject of induction of labor at term must be distinctly separated from that question of induction of labor before term, but after fetal viability. There is no question that the termination of pregnancy for grave diseases of the mother associated with pregnancy, for the diseases and accidents of the fetus, and for the more serious disproportions in size between the fetus and the pelvis, is becoming very much more restricted. The early termination of pregnancy for such serious diseases of the mother, as chorea, severe nervous diseases, insanity, for early toxemias, and pernicious vomiting of pregnancy, is still of great value for these conditions indicate early interruption because of their seriousness to the mother, and pregnancy is interrupted early because we do not wish to deny the woman the relief which would probably not be effected if we procrastinated. In those cases of pelvic contraction where there is a disproportion between the size of the pelvis and fetal skull, the question of interruption of pregnancy frequently arises. I am not in favor of this procedure in every pelvic contraction of moderate or severe degree, for in those of severe degree cesarean section offers a better chance to both mother and child, but in those cases of moderate degree, we must use great judgment, the size and shape of the pelvis must be accurately known, and size and the degree of compressibility of the fetal head in relation to the pelvis must be accurately ascertained; this, if necessary, must be determined under general anesthesia. Likewise must the duration of pregnancy be determined, at which labor should be started. I am of the same opinion as Norris, who says, that the interruption of pregnancy for pelvic contractions should never be done earlier than the thirty-seventh week of fetal gestation or even later if possible, and never when a pelvis measures less than 8.5 cm. Even with this minimum pelvic diameter the head of the fetus must be small.

For those cases, however, where there is perhaps only a slight pelvic contraction or none at all, and where pregnancy has been prolonged, we have a most valuable aid in the induction of labor when the fetal head is found floating above the pelvic inlet in a primiparous woman at or near the end of pregnancy, with only a moderate degree of pelvic contraction, for we can be fairly certain that the head is too large for the given pelvis. Why, then, allow our cases to reach this stage if we are in a position to observe them carefully and regularly? To deviate from the usual methods of waiting patiently until labor sets in of its own accord and interrupt pregnancy when such time has arrived that we feel

that the fetus has reached its full growth, is in my opinion not meddlesome midwifery but scientific obstetrics, we might say preventive obstetrics.

We must get away from the old time method of waiting until nature starts labor, perhaps after the babe is matured but much too large to pass the pelvic canal without difficulty and without operative trauma. By interrupting at term the patient and the doctor both know when the labor is going to occur, and the patient is spared many hours of suffering, her physical condition is left unharmed and the chances of her babe living are greatly enhanced. There is no great disadvantage to the child if labor occurs a few weeks before maturity, but there is an increasing danger to both mother and child when maturity has been passed, for then the child develops at the rate of 1 cm. in length each week and proportionately in weight.

The fact of successfully bringing a large, heavy baby into the world should today no longer be a pride to the attending physician, for it has probably been done at the expense of the mother's health and subjected her to a long and tedious ordeal.

The objections that have been raised to the interruption of pregnancy at term are (1) the danger of infection, and (2) the possibility of bringing a child into the world too early before it has a good chance of surviving. The danger of infection is avoided by proper technic and any one who is able to do clean surgery is capable of carrying out this maneuver satisfactorily. At present the induction of labor is carried out only by the specially trained physician, and those especially interested in the subject, but its scope must be widened and the general practitioner if he does not feel himself competent to interfere should at least be sufficiently well informed to know that it is being carried out with much success, and should so advise his patient. When it comes to the question of maturity we have perhaps a few more difficulties to overcome, but these, too, I believe, with practice can be eliminated. To depend on the date of the last menstrual flow is unreliable and unscientific. Many women do not remember exactly the date of their last menstruation and the same objection applies to the date of quickening. With this procedure the woman and child are far safer than when left to the watchful waiting policy of years ago, and with the methods at hand of calculating the time of maturity we can with a fair degree of accuracy arrive at conclusions that are seldom faulty. We must of course individualize and be just as careful to avoid hasty action as wavering and timid delays.

Let us make use of the Ahlfeld, the McDonald and the Perret methods to determine the size of the infant in utero, always of course



bearing in mind that they are all fraught with a certain degree of error, but sufficiently correct to be of practical value. An extremely large Ahlfeld or McDonald measurement usually means a large child, while a sudden diminution in either of these measurements shows that the head has entered the pelvis. The Ahlfeld method is perhaps the most reliable, since it is based on the fact that the fetus at full term measures 50 cm. and that the length of the fetus is the most reliable criterion of its maturity. Naturally, the Ahlfeld and McDonald methods are not very reliable when the head has entered the pelvis, and the Perret method cannot be obtained in such cases, but on the other hand, this fact does not detract from their value, for when the head has well entered the pelvis it is of less importance to know the size of the child, for then the chance of such head producing great trouble is not likely, unless there be a contraction at the outlet, since it shows that there is no marked disproportion between fetus and pelvis. What method should be used for the induction of labor will depend on individual preference and technical proficiency developed in a given method. Most obstetricians prefer the use of the Voorhees bag.

#### CONCLUSIONS

1. The need for careful observation throughout pregnancy, not only of the mother's condition, but of the progressive growth of the child.
2. The size of the child to be measured by the Ahlfeld, McDonald and Perret methods.
3. The interruption of pregnancy at such time when after careful measurements of the fetus maturity is indicated, no matter if the pelvis is normal, and not be satisfied to wait until nature has started labor.
4. To have the strength of your convictions, to carry out a method of treatment that is correct even though it may not have been generally accepted as proper.

Metropolitan Building.

#### DISCUSSION

DR. F. T. VAN EMAN, Kansas City: This is a subject about which quite a little has been written in the past year or so and while the estimate of the size of the fetus in utero, the size of the maternal pelvis, and the consideration of the chances for a passage safe to both mother and child is not new, yet it is only of comparatively recent date that this problem has been given careful study and certain procedures adopted as a result of these calculations. Like all other new things opposition is met with and we hear of "labor by appointment"—as a means of saving the accoucheur's time, or permitting him to keep a week-end social engagement! It is needless to say that any procedure which is followed for any reason other than in the interest of the expectant mother and her unborn babe is reprehensible in the highest degree and cannot be too severely condemned.

On the other hand, childbirth is a mighty old institution and to advise some apparently very radical

method which is contrary to the old established rule requires considerable moral courage on the part of the doctor. Time however will do much to correct this matter and some day our women will be brought into labor when it is demonstrated that the fetus is matured regardless of the calendar, when no woman will be permitted to go thirty days over her time and 10 and 12 pound babies, and larger, will be a disgrace to the attendant, especially in primipara cases. I quite agree with the essayist that while prenatal care is mostly devoted to the interest of the expectant mother we should not lose sight of the child and in no better way can we conserve the interests of both than by carefully watching the development of the child and by instituting labor before the point of over-maturity is reached, thus giving us an average sized baby, a shorter and less difficult labor, reducing the percentage of operative deliveries with less injury to the child, and a lowered fetal mortality and morbidity, and with less injury to mother, also lowering her mortality and morbidity.

As the essayist states, it does little good to know the size of the maternal pelvis unless we have some idea of the fetal head except to know that a passage of average size will in all probability permit the exit of a passenger also of average size. Therefore it is obvious that we should know the probable size of the passenger, and while we cannot make absolute measurements, yet by resorting to the methods mentioned by the essayists, Ahlfeld, McDonald and Perret, we can come to fairly definite conclusions which will suffice for all practical purposes. It has been my practice for some time to follow this procedure: When my patient reaches term calculated by the date (not always reliable) given me and when all measurements show a matured child, to induce labor by a very simple process, 1 to 2 ounces of castor oil at 9 a. m., 10 grains of quinin at 1, 3 and 5 p. m., omitting the 3 or 5 p. m. doses of quinin, or all of them, if labor begins. This has been successful in the majority of cases, but like everything else it sometimes fails, in which case I wait for several days and repeat or I use the Voorhees bag and this also is not a 100 per cent. success, but uniformly so. I have occasionally had to use quinin or small doses of pituitrin in connection with the bag and sometimes a weight on the bag is necessary. The same procedure is followed in cases showing maturity regardless of menstrual dates. In cases giving a history of previous and very difficult labors, with large babies which are either injured and stillborn or which have died shortly after birth, labor is induced two to three weeks before term. In such cases I find that the uterus has not developed sufficient irritability to respond to the castor oil and quinin treatment so readily, and the bag is nearly always necessary, though the simpler process is tried at first. I have said nothing about the induction by bag in certain pre-eclamptic cases, which is well worth considering, other measures failing.

Neither do I think we need to consider a dyslochia due to a contracted pelvis for here, I believe, the patient had best be given the test of labor, unexamined vaginally and failing, a cesarean section is the procedure of choice. However, in cases of moderate contraction of the pelvis, an early induction is worthy of consideration, yet I would wish this contraction to be of a very moderate degree.

It is scarcely necessary to say that the induction of labor thus outlined is not a work for a man who has an indifferent idea of asepsis, for the danger of infection is ever present. It is something that should be carried out in a well equipped hospital, but nevertheless it may be safely done in the home providing the attendant is perfectly familiar with a definite surgical technic and acts accordingly.

I wish especially to call attention to the advantage of an early induction of labor in cases which have previously ended disastrously to the child for reasons already given. Many a home may be brightened and made happy in the possession of a living, healthy child which would otherwise be impossible except by a cesarean section and I wish to say that I have done enough and seen enough of cesarean sections to make me very careful in advising them.

DR. GEORGE CLARK MOSHER, Kansas City: I think this important subject of estimation of development of the fetus and induction of labor at full term has been excellently covered by Dr. Vogt, and he leaves very little ground for argument. Two years ago Dr. Charles B. Reed of Chicago was in Kansas City and gave a paper on this subject before the Obstetrical Section, Jackson County Medical Society. Dr. Hamilton and I visited him in Chicago in February at his invitation and seeing the results of the method we at once adopted it and since that time we have had in our service at the General Hospital and the Christian Hospital in Kansas City about 200 cases of bag induction in cases where for some cause it was deemed a wise and conservative thing to do. There was encountered no infection, no premature rupture of membranes, no premature deliveries, in fact, no trouble whatever. I believe the child may be considered mature at term when the mother's McDonald measurements show 35 cm., the baby will weigh 7 pounds and will be 50 centimeters in length. The advent of labor is an incidental thing, not always definite nor dependable. I also believe, with many distinguished authorities, that a 10-pound baby is not to be considered a source of pride to the mother but rather, as has been said, a disgrace to a doctor who allows his patient to undergo unnecessary risk and danger in delivery of an overgrown child. I believe that labor is shortened by the bag induction when necessary to employ this procedure, and the fact that the average labor with the Voorhees bag is about seven and one-half hours instead of twelve to seventeen hours as in the usual voluntary case, is a further argument in favor of the use of the method. We find the woman is less fatigued and gets up sooner than after a long, exhausting labor. We have been inserting the bag in cases of premature rupture of membranes when we believe it acts as an artificial cushion for the presenting part, replacing the bag of waters which was lost. So far as I know this is an original suggestion and has seemed to work most satisfactorily. The mother who has to hire a special nurse is saved that extra expense and the doctor can make plans for his case which otherwise he could not do. One of the dangers which most frequently have been charged against bag induction is the fear of infection. In the 200 cases we have handled there has been no infection. I am very much interested in Dr. Vogt's paper. It was along lines we have been following in Kansas City and I personally want to thank him for this very clear exposition of a subject now attracting a great deal of attention among obstetricians.

DR. B. G. HAMILTON, Kansas City: I have listened with much interest to Dr. Vogt's paper, and will say that I am in accord with everything that he has said.

The induction of labor is not a new procedure, but it has been brought more definitely before us in late years. When an induction is indicated the cervix should be exposed and dilatation done with Hegar's dilators. A Voorhees bag closely rolled is easily introduced beyond the internal ring by using a sponge forcep as a carrier. The bag is filled with water and the tube tied, all of which must be done under strict asepsis. Labor usually starts in from one to three hours but is delayed when an anesthetic is given. It

is not necessary in the majority of cases. Out of some 300 cases that Dr. Mosher and I have had there was only one in which the bag of waters was broken, and in no case did infection follow the procedure.

The size of the pelvis and the babe can and should be measured in every case, and where there is no disproportion of the babe to the pelvis the procedure is followed by happy results. In order for the best results to be obtained the head should be well down, in which the internal ring will be obliterated. This is especially true in primiparas. In eclampsia, if conditions permit, the use of the bag is the procedure of choice, since if interference becomes necessary the cervix is softened and partially dilated making mechanical dilatation easy. The use of the bag is especially indicated in heart lesions with broken compensation, in acute infectious diseases or in conditions where time is a factor. In the average case the bag is expelled in from four to six hours and labor is completed in from three to six hours.

In cases where there is a premature rupture of the bag of waters the cervix is brought in line with the head causing dilatation to be completed sooner; and from our series of cases we feel we can say that posterior cases are favored by lack of resistance of a hard cervix which allows rotation to take place earlier and shortens labor, and thus the strength of the patient is conserved. In no case do we feel that normal positions have been interfered with, but we do feel that malpositions have been favored.

We agree with Dr. Vogt that overtime and over-size babies which can be determined by measurement are unnecessary. If the size of the babe and size of the pelvis have been estimated in every case, inductions will be done more often in cases in which babes have heretofore been lost, and the maternal injuries have been severe.

DR. W. H. VOGT, closing: I believe when the men in general practice realize that the size and weight of the child can be fairly accurately determined they will then begin to see why they have had so much trouble with their previous cases where they had to use forceps, making the obstetrical room look like a slaughter house instead of a real delivery room.

The danger of infection is not great. My own personal experience with infection has been only one that I could say was infected. I have had three cases that ran a temperature of 101 the day following labor, but it immediately went down after that. I do not think that is dangerous in a normal case.

So far as the use of castor oil and quinin is concerned, I think we all use that with varying results, depending a good deal on the condition we are using it for.

I have personally never observed that the Voorhees bag produced any malposition, and I do not quite see how it is possible to produce any great malposition. On the other hand, it is certainly a great aid in softening the cervix and in producing the effect we are trying to get.

It is rarely necessary to use anesthetics, but if one has an extremely nervous patient it does no harm to give such patients a small dose of morphin preceding the operation—perhaps fifteen or twenty minutes beforehand. That usually quiets her sufficiently to do whatever you want and does not require the use of an anesthetic.

I would only consider the induction of labor in cases I could control so far as going to the hospital is concerned. I would not attempt the induction of labor in a private home. There are too many chances of fault in our technic. You need help to do it, which you can have in a hospital, and it must be done under the most aseptic conditions.



## EXTRACIRCULATORY FACTORS IN ANGINA PECTORIS\*

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We have a description of angina pectoris from Jenner followed by a more accurate description by Heberden. These men focused the attention of the profession on changes in the coronary arteries as the sole cause of angina pectoris. In this paper I wish to call attention to factors outside the cardiovascular system.

Heberden,<sup>1</sup> in his original paper on angina pectoris in 1768, gave the following description of the clinical picture: "Those who are afflicted with it are seized while they are walking, and more particularly when they walk soon after eating, with a painful and most disagreeable sensation in the breast, which seems as if it would take their life away if it were to increase or to continue. The moment they stand still all this uneasiness vanishes. In all other respects the patients are, at the beginning of this disorder, perfectly well, and in particular have *no shortness of breath, from which it is totally different.*" (Italics mine.)

The two points in this definition that I want to emphasize are the pain on effort and the absence of shortness of breath. Lack of appreciation of the relation of chest pain to exertion has resulted in much confusion in the diagnosis. Although the exertion may be trivial, and although nocturnal attacks occasionally occur, without pain on exertion angina cannot be diagnosed. In Heberden's description no reference is made to angina sine dolore. To recognize a condition with the chief and characteristic symptom absent, is indeed difficult. Lewis<sup>2</sup> has described disturbances in the mechanism of the heart, such as ventricular fibrillation, vagus inhibition and rare forms of heart block, any of which may produce symptoms similar if not identical with the condition formerly described as angina sine dolore. There is nothing characteristic about the severity or radiation of the pain in angina, as in pseudo-angina the pain may be intense, and frequently radiates down the left arm, but the history of pain on exertion is lacking.

It is significant that Heberden emphasized the absence of shortness of breath, while many modern writers speak of anginal seizures being accompanied by dyspnea, râles in the chest, copious expectoration, etc., thus confusing angina with cardiac asthma, bronchial asthma, pulmonary edema, and other conditions. My understanding therefore of the term angina pectoris, is pain in the chest, arms or abdomen

bearing a definite relation to exertion, and not associated with dyspnea. The inference seems justifiable that from such symptoms the diagnosis of angina vera should be made, regardless of the age of the patient, the cardiovascular findings, or the outcome of the case. Although numerous theories have been advanced for the cause of angina, such as "cramp of the heart muscle," "neuralgia of the cardiac plexus," "intermittent claudication," "gastrocirculatory disturbances," etc., I shall discuss briefly only three, namely, organic disease or functional disturbance of the coronary arteries, Allbutt's<sup>3</sup> theory of suprasigmoidal aortitis, and angina as a symptom of heart fatigue or disturbed mechanism due to other causes.

That sudden occlusion of a coronary artery will produce the typical picture of angina is positively established, while gradual occlusion of a coronary artery may, by lessening the blood supply to the heart muscle, account for attacks of angina over a considerable period of time. But the apparent recovery of some patients, the long duration of the disease (twenty to thirty years in some instances), and particularly the absence in some cases of any changes, macroscopic or microscopic, in either coronaries or heart muscle, justify the doubt of the coronary origin of all cases. When the coronaries are found absolutely normal, a "functional disturbance due to spasm," is fully as hard to accept as it is to prove. Osler,<sup>4</sup> in his Lumleian Lectures, reports a vigorous youth *devoted to athletics* (italics mine) who died from a typical anginal seizure at the age of 28, having been a sufferer for two years. At necropsy "nothing abnormal was found in the heart, coronaries, or aorta."

According to Allbutt, all cases of angina are due to suprasigmoidal aortitis. The strongest argument against Allbutt's contention is that it is not borne out by clinical experience or pathological findings.

Mackenzie<sup>5</sup> has particularly emphasized that angina pectoris is a symptom of exhaustion of the heart muscle due to deficient nutrient blood, as in coronary disease or in anemia, or overwork, as in cases of hypertension or of aortic disease or heart strain from overexertion. That angina is not always associated with a serious and definite morbid condition was recognized by the older clinicians. Laennec<sup>6</sup> in 1838 expressed his opinion as follows: "Angina pectoris in a slight or middling degree, is extremely common and exists very frequently in persons who have no organic affections of the heart or

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.

1. Quoted by Osler: *Angina Pectoris and Allied States*.

2. Lewis, Thomas: *Lectures on the Heart*.

3. Allbutt, Clifford: *Diseases of the Arteries, including Angina Pectoris*.

4. Osler, William: *Lancet*, Vol. I, 1910.

5. Mackenzie, James: *Diseases of the Heart*.

6. Laennec, R. T. H.: *Diseases of the Chest*, 1838.

large vessels. I have known many individuals who had suffered a few very severe but short attacks, and had no further return of it." Herrick<sup>7</sup> reported four patients with high grade anemia that had typical anginal attacks.

Heart strain as a cause of angina, a factor which is given little or no consideration by most writers, is illustrated by the following case reported by Mackenzie<sup>5</sup>: "A youth of sixteen rode a bicycle 100 miles in a day, over a hilly road. The next day after riding a short distance he was seized with a typical attack of angina pectoris. Following a period of rest the attacks were less easily induced, but not for a year was he entirely free from trouble."

DaCosta<sup>8</sup> has collected several hundred cases of primary cardiac strain occurring among Union soldiers in the Civil War. "Some of these suffered so severely from angina occurring in the midst of a charge that they could endure it no longer, and threw themselves on the ground directly in the line of fire rather than suffer the pain in the chest."

The three following cases I wish to submit as evidence of causes of angina outside the cardiovascular system. The first case suffering from severe angina indicates that heart strain and reflex disturbance from irritation of the fifth nerve were either the sole cause or important contributing factors:

J. W. P., a physician, 54 years old, weighing 204 pounds, had his first anginal seizure in October, 1914, immediately after running over half a mile across an alfalfa field. Following this, susceptibility to attacks gradually increased until March, 1916, when I first saw him. At this time he was totally incapacitated and confined to bed. The pain, which never came on except after exertion, began under the upper sternum and radiated to the shoulders and down both arms. The pain was usually preceded by a constriction of the chest and a painful sensation in the throat, soft palate, and in the upper molar teeth on both sides. The attack was of a few minutes duration and subsided with cessation of effort. As the pain let up there was usually considerable belching of gas. On examination there was nothing abnormal found, excepting areas of hyperesthesia over the second rib on both sides and in the region of the left nipple. The pulse rate ranged from 66 to 76, the blood pressure was 115-60, and auscultation of the heart, roentgen-ray pictures of the chest and the Wassermann test revealed nothing abnormal. He had always been a total abstainer and never smoked to exceed two cigars a day. He had typhoid at 20, was operated on for suppurative appendicitis at 30, had a severe infection of maxillary antrum at 48, suffered from arthritis for about a year at 50, and in recent years has had a number of attacks of phlebitis in the left leg. Following the extraction of two decayed teeth and two weeks rest in bed, he was so much improved that he began doing part of his work. For one year he had occasional attacks on exertion, but they became less

easily induced, and for the last two years he has been practically free from trouble, although doing a large surgical business and walks up three flights of stairs several times each day without distress.

As a cause for the angina in this case, organic changes in the myocardium, coronaries, or aorta cannot be positively excluded, and for those who accept the coronary or aortic hypothesis for all cases, the history of infection for a period of years easily could be assumed as sufficient underlying cause for a serious organic condition. However, the circumstances of the first attack, the negative cardiovascular findings, and the gradual but positive subsidence of symptoms, seem to corroborate the following theory of the pain in angina pectoris as given by Mackenzie<sup>5</sup>:

"The stimulus from the heart to the spinal cord irritates the nerve cells in close proximity to the nerve conveying the stimuli from the heart. The violent stimulation of the spinal cord may leave, after its subsidence, an irritable focus in the cord, rendering that portion of the cord more susceptible to stimulation, so that it becomes easier for future attacks of angina to be provoked. So sensitive may this irritable focus become, that an attack of angina pectoris may be provoked by a stimulus reaching the focus from regions other than the heart."

It seems only a rational conclusion that a healthy heart can be strained by overexertion, and such a condition would have to be manifested by either loss of tone with shortness of breath, or by pain and the associated symptoms of angina pectoris. In the above case, the exertion that brought on the first attack was obviously sufficient to produce a violent stimulation of the spinal cord, causing an irritable focus. The assumption of an irritable focus in the cord would explain the susceptibility to subsequent attacks, and the hyperalgesic areas on the chest which did not disappear for over a year, are further evidence of such a focus. The teeth as a factor in the case would seem to be a matter of importance. The relation of decayed teeth and apical abscesses to such disturbances in the mechanism of the heart as is found in extrasystoles, auricular fibrillation, and paroxysmal tachycardia, is becoming generally recognized. Barker and Richardson,<sup>9</sup> in a recent article, report a case of paroxysmal tachycardia and auricular flutter apparently cured by the extraction of teeth and the removal of a small adenoma from the thyroid gland. In one of Mackenzie's<sup>10</sup> patients, during an anginal seizure, the pain sometimes radiated to the face and localized opposite two decayed teeth in the lower jaw. This was explained by Mackenzie by the irritation of the vagus nucleus

7. Herrick, James B.: *J. A. M. A.*, Jan. 12, 1918.

8. Quoted by Hirschfelder, J. O.: *Diseases of the Heart and Aorta*.

9. Barker, L. F., and Richardson, Henry B.: *Arch. Int. Med.*, Feb. 15, 1919.

10. Mackenzie, James: *Heart* 2, 1910-1911.



causing a stimulation of the central end of the fifth nerve. If this explanation is correct, and there seems no reason to doubt it, it is fair to assume that stimulation of the fifth nerve may affect the central end of the vagus, and affords a plausible explanation for disturbances of the mechanism of the heart due to diseased teeth.

Although there are many theories for the pain in angina pectoris, the one point on which all clinicians agree is that patients with dilated hearts do not suffer from angina, and furthermore angina subsides when dilatation supervenes. This fact was recognized by the older clinicians and attributed to mitral regurgitation, but the modern view is that the mitral murmur is a symptom of the dilatation rather than the cause of it. It is also an established fact that dilatation is due to loss of tone; without an impairment of the function of tonicity dilatation cannot occur. In all hollow muscular organs, such as the bladder, the stomach or intestines, increased work causes at first an increase of tone, later loss of tone and dilatation. Therefore the inference seems justified that in angina pectoris there is hypertonicity which may be due to overwork from any cause. As vagus stimulation increases the function of tonicity, stimulation of the central end of the vagus by irritation of the fifth nerve seems to be a rational explanation of the mechanism by which diseased teeth become a factor in angina pectoris.

Irritation of the fifth nerve as a possible factor in angina, is illustrated by the following case:

On Feb. 22, 1916, in consultation with Dr. Samuel Ayres, I saw Mrs. S., suffering from a series of anginal attacks, practically constituting an "angina anginosus." Lifting the left arm from the bed was sufficient to precipitate a severe seizure. The blood pressure was 150, the Wassermann test negative, and there was nothing to find on physical examination except areas of hyperalgesia in the submammary region and over the second rib on the left side. She was 49 years old, weighed 165 pounds, and had always been healthy except for the occasional attacks of pain in the left chest radiating down the left arm. Until the day I saw her, she had never had pain except on exertion and there had never been any shortness of breath. The pain was so severe for a week that it was necessary to give large doses of morphin. She was kept in bed for three months. Immediately after getting up a roentgen-ray picture of the teeth showed five granulomas, and the teeth were extracted. In the three years since her severe attack she has been entirely free from pain, although she has been quite active.

Being a believer in the coronary theory of angina for all cases at the time this patient was seen a very bad prognosis was given. The subsequent course would seem to prove that at least the prognosis was wrong.

My third case indicates that infected tonsils, apical abscesses, neuritis in the left shoulder and gallstones were possible factors:

Dr. L. F., a physician from Nebraska, had his first attack in January, 1915, while carrying a heavy grip and making his way through 6 inches of snow. During the rest of the winter walking up hill or even walking fast on the level would bring on an attack of severe pain, beginning in the region of the left nipple and radiating to the left shoulder and down the left arm to the elbow. During the summer months he was free from symptoms, but when the weather began to get cool in the fall, the angina recurred and was quite bad during the winter of 1915 and 1916. For four weeks in the spring of 1916 he suffered from severe neuritis in the left shoulder and was confined in a sanatorium in Lincoln, Neb.

He consulted me in November, 1916. He was having so much pain at this time that he could not do his work. He never had an attack except on exertion. Examination revealed diseased tonsils, three teeth with root abscesses, and tenderness over the gallbladder. The blood vessels were not thickened, blood pressure 125, and nothing was found on examining the heart except an occasional extrasystole. A roentgen-ray picture by Dr. E. H. Skinner showed the heart and aorta normal in size and the Wassermann test was negative.

At the time of his first attack he was 41 years old, and weighed 200 pounds. He had never used alcohol or tobacco. In his youth he had had a number of attacks of quinsy, pneumonia at 19, typhoid fever at 22, and was operated on for suppurative appendicitis at 26. For ten years before his first attack of angina he was apparently in perfect health.

He was advised to have the tonsils removed and the teeth extracted, which was done, with definite although not marked improvement. During the following winter he had a number of attacks of gallstone colic and in the spring of 1917 returned for further advice. He was now having so much pain that he was again unable to do his work and for a few months had to have a boy go with him to carry his grip. The anginal seizures had become more easily induced after the attacks of colic began. He was advised to have the gallstones removed, and two weeks later Dr. Allison of Omaha operated and removed twenty gallstones.

In a letter received from the doctor a few weeks ago, he stated that he is much improved, although not free from trouble. He made the interesting observation that anything cold carried on the left arm would precipitate an attack, while carried on the right arm had no such effect. Regarding the effect of the gallbladder operation he said: "Before the operation I was totally incapacitated for work or exercise, but since then I have been able to carry on an active practice, although I have mild attacks of angina."

Several features in this case deserve comment. The exertion of walking through deep snow for a man weighing 200 pounds is sufficient to cause heart strain. As the nerves making up the brachial plexus come from a segment in the spinal cord close to the segment receiving impulses from the heart, it is possible to see how the neuritis in the left shoulder could increase the irritable focus in the cord, caused by the violent stimulation of the cord due to the heart strain. This assumption is supported by the history of anything cold carried on the left arm precipitating an attack.

Also it is significant that the nerves carrying impulses from the gallbladder center through the phrenic in the third, fourth and fifth cervical branches of the plexus which supply the arm and shoulder.

The improvement following the gallbladder operation might be attributed to the rest in bed, but that the diseased gallbladder reflexly through the phrenic nerve increased the susceptibility to the anginal seizures seems probable. The gallbladder as a factor in heart failure has been noted by Babcock<sup>11</sup> as a clinical fact.

Schmidt<sup>12</sup> says that "occasionally in gallstone colic the pain may radiate to the left shoulder and down the left arm." The number of patients with angina that I have seen that also give a definite history of gallstones, indicates that the co-existence of the two conditions is more than incidental.

The importance of considering other factors besides diseased coronaries and aortitis in the diagnosis and prognosis of angina is well expressed in the following statement in a recent article by Head:<sup>13</sup> "Angina pectoris is merely the name for an explosive outburst, which may be due to diverse causes, and should not be used as a label for a box of amyl nitrate pearls."

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#### DISCUSSION

DR. ELSWORTH SMITH, St. Louis: I think Dr. Bohan's paper is most timely, because I do not think the extraneous causes of angina pectoris can be accentuated too greatly. I want to just allude to two cases which show that the external or remote cause may be far more removed than the teeth or diaphragm.

One case was a man of the arteriosclerosis type with hypertension, who had had anginal symptoms—the characteristic pain. He was referred to a genito-urinary surgeon because of some prostatic symptoms and went to the hospital in very good condition as regards the circulation. They passed a soft catheter, and then I was summoned hastily, and found him in the throes of angina, and he had not had an attack for some time.

The second case was a man who had never had angina before but he had a mitral lesion which was thoroughly compensated, and had been under my observation for years. He had some symptoms in the bladder which suggested possible residual urine and he was referred to a genito-urinary man, and the same thing happened to this man. A soft catheter was passed, he was thrown into an attack of angina. He was confined to bed for a number of weeks. I think the passage of the catheter was simply an extraneous exciting cause. I think the condition must be present for the development of angina and these reflex irritations set off the explosion, and while it is possible that our ideas of coronary disease may be exaggerated, yet I am not disposed to consider this cause lightly. In the first place we know that post-mortem studies show a large percentage of coronary

disease in cases of angina pectoris. It is also true that the character of death in angina pectoris speaks for some very sudden change in the physiology of the heart muscles, some shutting off of the circulation of the muscle producing a so-called cramp. It may be that in these early cases—the cases that come to necropsy without the coarse lesions in the coronaries or in the aorta—the condition may be due to a spasm of the coronary.

DR. BOHAN, closing: Aortitis or coronary occlusion is undoubtedly the commonest cause of angina, but that angina vera may occur without disease of either aorta or coronaries is equally true. Spasm of normal coronaries as a cause of angina has not been proven. The cases reported indicate that heart strain associated with such extracirculatory factors as obesity and reflex irritation of the fifth or of the phrenic nerve, may cause severe angina and even death without any disease or functional disturbance of the coronaries or aorta.

That diseased teeth and an infected gallbladder cause cardiac pain in most cases at least, through the nerves rather than by producing a myocarditis, seems probable. The radiation of pain to the left shoulder and down the left arm in cases of gallstone colic has been noted by reliable observers. In such cases the assumption seems justified that the painful impulses pass over the phrenic to the cervical plexus.

The connection between cardiac pain and areas of irritation in the region of the phrenic nerve, as well as the rather frequent co-existence of gallstones and angina, indicate the importance of considering gallstones as an extracirculatory factor in angina pectoris.

#### MEDICAL PROBLEMS IN THE FUTURE\*

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My remarks will be along the same line as the preceding speaker. We have as a nation, as a people, and as individuals been reaching out from our accustomed vocations and activities, and our work has been along unaccustomed lines. Men in civil life and in professional life have done things they had not expected to do—all in the cause of a patriotic endeavor in this world issue. The medical profession has borne a noble part. In coming over from France with a large number of officers on a large ship I was struck with the universal complaint and criticism of practically everything. It was a pleasure however to hear many line officers pay tribute to the work of the medical profession, both in active military life and in civilian life. I do not think there was any difference. I think the men on draft boards and on various civilian boards or any kind of civilian work connected with the war, are entitled to just as much credit as the men in the Army and Navy Departments.

Now out of the war we return to civilian life with a wonderful experience. We know more clearly the deficiencies of past conditions. We

11. Babcock: J. A. M. A., Oct. 23, 1915.

12. Schmidt, Rudolph: Pain, 237.

13. Head, Henry: British Medical Journal, March 29, 1919.

\* Extemporaneous remarks at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



know as a medical organization we were aiming to help the general welfare primarily by promoting public health. That is the object of our society, and incidentally to promote our own interests. Since this military medical organization was hastily gotten up, on the whole the results were wonderful. Any one of us if we were called on could pick out fifteen or twenty experts in surgery, medicine, neurology, eye, nose and throat, etc., but when we begin to pick them out by hundreds and thousands the difficulty is immensely multiplied. So in any criticism of the conduct of the army we must take into consideration the conditions with which the medical department had to labor, with which the Surgeon-General's Office had to deal. What I say is not in the spirit of harping criticism, but is founded on observation gained from two years' experience in the service.

It appears to me as a first assertion that the medical department of the army and the civilian doctors were out of touch with each other. The medical department of the army was a small body of busy men, less than 1,000 when we went into the war, and up to 30,000 or 40,000 when we came out, so that a vast majority of the personnel of the department was made up of civilian reserve officers, and a vast amount of the praise or blame will have to come to them because of that fact.

The organization of the army, it seems to me, has some defects which have been brought out. The higher a man gets in the medical service the further away he gets from the practice of his profession, from the clinical treatment of disease. His experience, largely gained in times of peace when the mortality record is low—his clinical study of disease—is limited unless he is permitted and encouraged to avail himself of the clinical facilities of large medical centers. That is encouraged on paper but it has not been sufficiently resorted to. On the other hand, we as civilians have learned much of military life. We know that we have not supported the recommendations of the army medical department as it should have been supported in times when preparedness should have been our main aim. We have not encouraged the large expenditures necessary to carry out the progressive plans of the regular army medical profession. The Surgeon-General's department deserves great credit for the plans and specifications for hospital accommodations on an expanding scale. They worked out a splendid system of buildings and equipment. Instead of being the first erected they were the last and with the incoming of recruits, before the cantonments were finished, we started under the pressure of a rapid increase of sickness among the troops for whom accommodation was scarcely sufficient.

One favorable step, it seems to me, has been made in the Army in the establishment of the Sanitary Corps—men whose duty it is to perform administrative or clerical duties, to do the detail paper work—a personnel officer, a registrar and a compiler of statistics, etc. It seems to me that there are many instances in our experience in this war in which the medical personnel material was wasted. We were crying at the medical camps for men in all specialties when these same capable men were out in training camps picking up cigar stumps and trying to be disciplined into soldiers; and men of 45 and 50 put through the same tactics as men of 25 and 30. That is irrational and I believe it was recognized at the last by the medical authorities. There is little in a base hospital, for instance, that requires any special military training. As far as we can see there is little difference between a well conducted civilian hospital and a well conducted base hospital, and there is no reason for taking men from training camps and putting them on a base hospital staff, and then giving them duties as mess officers or anything else nonmedical, when there are civilians who do not require a professional education to perform these duties. I believe the development of this Sanitary Corps will, if it is followed out, largely do away with that divorce of the regular army medical officers from their professional duties.

On the other hand, the civilian officer goes into service as a practitioner in one specialty or another. He is not ordinarily a sanitarian. When you visit your hospital you do not go to the refrigerator to see that it has been cleaned properly; you do not examine the toilets and bed pans; you do not inspect the wards. All that is done by the lay authorities in charge of the hospital. In army life that must be done, and the ward surgeon and the medical authorities of the hospital are responsible for that kind of thing. I believe in a military hospital that is necessary, and I believe one point for us is to recognize the necessity of greater attention on the part of civilian physicians to matters of individual, household, and hospital hygiene and sanitation.

The ideas of construction as laid down by the authorities are excellent, but unfortunately at the time we need most air space is the time we have to do the most crowding. So our plants were not planned for the maximum which they must be called on to perform.

It is unfortunate that so many physicians who were in the service were not placed more properly in regard to their qualifications and talents.

The work of preparation in weeding out the defectives has been indicated in the statistics in papers read before this society. It gives us a problem as a state organization interested in

public health and welfare, to decide what we as an organization and as individuals are going to do about this condition. Missouri ranks thirty-first among the forty-eight states in the number of venereal cases among the drafted men. One neighboring state to the south had 19,000 syphilis in the draft, with, I believe, not as large a population as Missouri. Now, these cases, these foci of infection, are still with us. They must be handled through public agencies, through education, through proper facilities for prophylaxis, and through the proper reporting of these cases. It was a remarkable fact in base hospital work to note the number of defects; for instance, hernias and bad teeth. Nothing is as necessary to the army of any country as a nation-wide dental propaganda. Men came to our hospitals who had never used a tooth brush and did not know what mouth hygiene was—they had to be taught. Many were incapacitated by reason of such simple defects. The number of hernias that we saw among men who did not know before coming to the army that they had hernia was remarkable. These were in most cases well developed hernias, discovered when they came into military service, and they were glad to be relieved.

Another point that is obvious is the stupendous amount of illiteracy among the people at large. With our boasted public school system, with our tremendous sums of money given for school support and for educational facilities, we still have this appalling proportion of illiteracy among men going into service and now in civilian life. That is not essentially a medical problem but we as physician citizens should encourage the most advanced methods of education among our people.

Then the problem of medical education has been written about in a number of articles lately, during the war and since. The last week's issue of *The Journal of the American Medical Association* contains a plea by an officer for a reclassification of Class A colleges who turned out men who did as bad work as men who were in the fourth class colleges, many of which have gone out of existence, and his criticism was that these men graduating from these Class A colleges, while they had theoretical teaching, were not well instructed and trained in clinical teaching and observation. That is one of the basic factors at the bottom of our empyema epidemics. I would like to see much of the pharmacopeia, especially purgatives, thrown out of the army, if we could substitute for it an honest and careful examination of each man claiming or suspected to be sick. The sick call as ordinarily conducted is a farce and does not bring out clinical facts of importance, so that many cases came into the hospitals with well developed bronchitis, pneumonia or even empyema, their

resistance down to the lowest ebb and with hardly a fighting chance.

All these questions—and these are only a few of them—are matters of vital interest to the medical profession as individuals and as an organization, and my remarks are made as a plea for the building up and strengthening, the getting together in our state on medical organization, supporting our officers and administration in aggressive and progressive methods to bring this state to a high rank in health matters. It means much for the state in a commercial way, it means everything for it in a social way. We must face these things. We must educate the public or in some way get them into the habit of preventing typhoid fever as we do in the army. There are communities in this state where epidemics of typhoid fever occur, and they would not occur if proper safeguards had been adopted and prophylactic vaccination had been instituted. These things have been proved a benefit and should encourage their adoption in civil and industrial life.

The matter of industrial medicine is occupying a great deal of attention now. Men in large industrial enterprises are examined as they are for military service, and placed in that industry in the type of work which will be best for them.

Now as to the medical profession's own interests we see that socialistic ideas are gaining a greater and greater foothold. The medical profession of England should be an example to us. Right now in this state there are many men who are working for industrial organizations on a fee table decided on by an underwriter's association, who make their fee rate on a minimum rather than on a reasonable or maximum basis. These are the matters in which, for our own benefits as a community and as citizens and as individual doctors, we must take an interest and face together, make our organization strong, fight together and fight strongly.

In this state for several years there has been an effort to put the conduct of the public institutions on a modern efficiency basis. I think that no practical progress has been made except as such discussion is educating to us and to the public. We are organized in councilor districts. Would it not be well to consider the reorganization of these districts and have them coincide with the legislative districts, and let the doctors of each legislative district have a voice, let the councilors be responsible for the districts, and let it be known that the legislator who has not the proper medical vision would not receive the endorsement and influence of the physicians in that community.

In the limited time at my disposal, which has expired, there is but scant opportunity to more than touch the high places of my subject—Medical Problems of the Future—but in clos-



ing I do want to emphasize the fact that as an organization we have not yet accomplished the high aspirations and ideals we have aimed at in this state. Our problem is to find out the reason for failure or incomplete success and to set our house in order so that we may most effectively in proper time accomplish the advanced standing which the professional intelligence and citizenship of our membership demands and entitles us to. Knowing the symptoms and pathology should stimulate us to apply the remedial measures necessary.

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### TOXEMIA \*

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As the germ theory of disease has become developed by medical science into more or less positive knowledge, and a large per cent. of human ills can be traced definitely to specific bacterial origin, the minute results of such ailments are becoming more commonly known to the general practitioner; and even though toxemia is not always due to a distinct and well defined disease, the study of pathogenic bacteria has been instrumental in ascertaining facts concerning toxins which are proven to be caused by agents other than bacterial, thereby widening our knowledge of a subject which for so long kept medical men from a correct understanding of the results of disease, necessarily imposing empiricism on the practice of the profession.

Toxemia, primarily and in its simplicity, means, "Some poisonous principle in the blood." For our own convenience of study and description, we have classified the subject under two heads, namely, physiologic and pathologic toxemia.

Even though any form of toxemia soon becomes pathologic in character, ultimately producing conditions which soon develop with distinct and well defined disease manifestations, we are quite well aware that the biochemic changes during the metabolic processes of the active cell, when there is the least derangement of functions, discharges into the circulation biproducts which require extraordinary efforts of elimination. Even with normal cell activity during metabolism, if the function of elimination becomes retarded in the least, katabolic excreta soon becomes a menace to the life of the healthy cell.

Then, again, do we find cases where too large quantities of assimilable nutrition has been presented for cell use, necessarily over-stimulating

and weakening the organic processes through faulty assimilation.

Bearing in mind that all substances which enter the body, unused or useless substances not eliminated, produce toxemia, we can in a measure understand how overfeeding may cause retardation of elimination and congestion of the blood and lymphatic streams with food products until constructive metabolism has been retarded to a minimum.

For a long time the medical fraternity has been aware that the intestinal tract has been responsible for more or less trouble in producing poisons which are absorbed into the circulation, causing many functional derangements.

The term autointoxication has been applied to this form of toxemia; but in the light of present opinion, the same term might be applied with equal propriety to all the previously mentioned conditions resulting from abnormal metabolic or trophic changes.

Just how extensively absorption of poisons of any description takes place from the intestinal tract has not yet been very accurately determined. One of the peculiar functions of the bowel is to eliminate waste material, and it is surprising how few products of decomposition are actually allowed to pass into the lymphatic circulation.

Often do we find cases of chronic constipation where the lower bowel is evacuated but once or twice a week, or in others where the decomposition is of the most rancid character, and yet the patient apparently remains in the best of health.

Dr. J. C. Wilson, in his work on "Medical Diagnosis," announced that no toxic principles but the acetone bodies had ever been proven to enter the circulation from the intestinal tract, not even the products from putrefactive bacteria.

However true these statements may be, the fact remains that clinical experience often points to the bowel as a frequent source of toxemia, and even though we may not understand the chemistry, physiology or the bacteriology of the production of such poisons, we are convinced that such do exist and must be considered by the clinician.

We now come to that part of our subject which deals with toxins resulting from the various pathogenic micro-organisms.

In their efforts to find remedies to combat the various bacteriological diseases, pathologists have been instrumental in throwing much light on the subject of toxemia, not only its treatment but on its etiology and its effect on the functions of the body.

The toxins produced by pathogenic bacteria are probably alkaloidal in character. Some are developed and liberated by the growth of the

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.

live bacteria, while others appear to be generated only from the dead germs after they have spent their force as parasitic organisms.

The toxins being very soluble are quickly absorbed into the lymph and blood streams and are conveyed to all parts of the body.

For reasons unknown, some toxins seem to possess special affinity for certain anatomical structures, producing quite distinct and characteristic symptoms, while others appear to have no definite mode of attack or particular manifestations to assist in the diagnosis.

As illustrations, we might mention the toxins of diphtheria, which have for their most common sequelae peripheral neuritis causing paralysis of the heart, the muscles of the throat and of the lower extremities. The toxins from tetanus which affects the voluntary muscles, especially those of the lower law, giving very distinct and characteristic symptoms, while the toxins from typhoid fever, pneumonia, erysipelas and scarlet fever produce profound depression of the entire system resulting from inhibition of all bodily functions.

To the general practitioner, the toxemia arising from various trophic changes and parasitic diseases are usually considered a component part of the ailment which together with its symptoms, is treated according to definitely prescribed and well recognized methods, without much attention being paid to either preventing the development of toxins, reinforcing the body for greater effort, or assisting in the elimination of the poisons.

Personally, I have little sympathy with the physician who fails to put forth every effort to control or abort a disease simply because that disease is "self-limited," or capable of destroying itself through its own toxin production.

It is true that we are often handicapped through lack of knowledge of any definite means to control the development of bacterial organisms within the body, but I believe it is not too much to predict that in the near future medical science will produce specific biologicals to successfully combat practically all bacterial diseases, and that the general practitioner will as regularly carry his stock of biologicals as he now carries his case of drugs.

We are at present as conscious of the effect produced by the administration of some of our serums and serobacterins as we are when we give a dose of morphin, quinin or aconite.

No one, I think, would today question the efficacy of the proper use of biologicals in pneumonia, diphtheria or streptococcus infection, and yet how often do we fail to sacrifice the effort to control their development or inhibit the potency of the toxins on the tissues.

One of our first duties when called to treat a case of toxemia or any disease from which

toxemia may arise, is to open all the channels of elimination. The intestinal tract should be thoroughly evacuated. Oils or salines receive my preference. Drastic or irritating cathartics are to be avoided. In cases where the intestinal tract is under suspicion, small doses of the mild chlorid of mercury often repeated are not disappointing in their results.

The alkaline diuretic salts promote destructive metabolism, assist in the function of oxidation and stimulate the kidneys to better action.

I think it is generally conceded that the free administration of sodium and potassium to patients suffering with influenza is one of the fundamental and primary therapeutic measures in successfully preventing the remote toxic effects of this disease. This principle, however, is just as applicable to those cases of toxemia which are produced by other septic diseases.

Likewise do we find large quantities of water to be most helpful in establishing a perfect system of drainage through the organs of elimination.

Diaphoresis is an important adjunct in the treatment of toxemia from any cause.

The last, but not least, of our duties to toxic patients is to fortify the bodily tissues and functions against the poisons present.

During the epidemic of influenza just past, it became my custom to nourish my patients as fully and completely as digestion and assimilation would allow, being extremely careful not to further gorge the already over-full channels of katabolism.

The principal reason for such a course of action was the rapidly depreciating leukocytes and the diminishing vitality of the red blood cells.

Apparent success with this practice in my efforts to battle with the most fatal and prevalent of all causes of extreme toxemia, led me to believe that many cases of toxemia from various causes have terminated fatally or otherwise resulted in permanent injury to the patient, fully as much from the lack of nourishment as from the toxemia itself.

True it is that in practically all cases of toxemia the stomach is in an unfavorable condition for the reception of food, which fact makes it imperative that the physician render proper assistance to nature in the rehabilitation of the gastric functions.

This may not be an easy task to perform, and no routine treatment can be advised to meet the demands of every case; and therein lies the reason for the discerning and intelligent physician.

In all cases of toxemia the heart should be often examined and at the slightest indication of weakness or derangement of function, it should receive adequate attention.



For general treatment of the heart I have found but one drug, and that drug is digitalis. For quick temporary relief a few doses of strychnia is to be advised.

Absolute rest in bed, coupled with the administration of some of the standard preparations of fox glove, is the best way to strengthen and protect the functions of the heart against the effect of toxemia.

As far as I am aware, it makes but little difference what disease is responsible for the toxemia, the treatment is practically the same; and I believe it well to anticipate the development of toxins by expectant treatment, which is nothing more than the practice of preventive medicine.

Today the physician examines his patients for focal infections in the teeth, tonsils, cranial sinuses, gallbladder, appendix, pelvic organs and within the lumen of the bowel, because he knows of the possibility of such findings. Why should he not prepare for the development of toxins from the various causative factors which he knows to be imminent?

If we devoted more time in studying the individual needs of our patients who are suffering from infectious diseases, keeping in mind these three factors in treatment, inhibition of disease, fortification of bodily functions and opening of the channels of elimination, as physicians, we would render a greater service to humanity.

#### A REPORT OF TWO CASES OF ALLEGED DUKE'S DISEASE WITH A VESICULAR ERUPTION

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Clement Dukes, an English physician, as well as A. N. Filatov, a Russian pediatricist, described an alleged contagious disease which simulates rubella or rotheln, scarlatina and measles and ends in a lamellar desquamation. The two cases which came under my observation seemed not only to resemble the three diseases mentioned but varicella as well.

The first case was a girl, 16 years of age, white, living in the congested district of Kansas City. When first seen, patient was complaining of a general malaise, slight photophobia and intermittent headaches. Examination revealed: temperature, 101.4; pulse, 110; respiration, 28; marked conjunctivitis, no infection in throat, slight coryza, chest and abdomen negative. Skin had a pale, rose colored appearance with a macular eruption which had not coalesced; was somewhat raised. Color disappeared on pressure, extended over face, upper chest, buttocks and inguinal regions. Koplik spots present. White cell count 10,400, red cells 4,980,000. Urine, slight trace albumin, otherwise negative.

On the second day conjunctivitis had disappeared and the patient was complaining of a marked sore throat, some nausea and had had a chill during the night. Temperature, 103.4; pulse, 128; respiration, 30. The throat revealed a slight inflammatory process. Chest and abdomen negative. The skin now displayed a diffuse uniform redness over the whole body, the "anemic ring" being present on the markedly red face; tongue normal. The red color was now distinctly bright red as described in scarlet fever; disappeared on pressure but returned immediately when pressure was removed. No change in urinary findings but the blood count showed an increase to 19,400 whites; no inclusion bodies in the polymorphonuclear leukocytes.

On the fourth day the patient had no complaint. Temperature, 99; pulse, 80; respiration, 26. Head, chest and abdomen normal. Redness of skin had partially disappeared but on the chest, in axillae, over abdomen and back, were clusters of vesicles filled with clear fluid. The patient now looked the part of an ordinary case of varicella.

Recovery was uneventful. Desquamation was that of varicella where the vesicles were and about the heels, elbows and other parts, as in scarlet fever. Patient discharged in fourteen days.

The second case was in a man, 26 years of age, in a military camp in Florida. His symptoms followed the lines of the preceding case except that there was a lapse of four days between his scarlet eruption and his vesicular eruption and his symptoms were milder throughout. Opportunity was found here to make a blood examination three weeks after his initial quarantine and he was found to have 4,200,000 red cells, showing an anemia following scarlet fever. His vesicles became turbid, crusted and dropped off after five days and by the end of the fifteenth day he had finished desquamating from his scarlet fever.

Although contacts to both cases were plentiful no other cases resulted. Neither gave a history of contact with previous cases.

Fussell describes a vesicle filled with turbid contents in scarlatina miliaris but the vesicles in both of these cases were filled with a clear fluid and there were no petechiae. Osler, as well as other authors, speaks of miliary vesicles in measles but they do not have the earmarks of varicella. During the spring of 1918 in Kansas City it was the opinion of some that a few of the many thousands of cases of rotheln occurring at that time were Dukes' disease but although I had an opportunity to see many of these I did not find any with the vesicular eruption.

The borderline between German measles and scarlatina is not always distinct but in both of the cases being reported the symptoms and signs of first measles, second scarlatina and third varicella seemed to be well defined. The only confusion arising was during the first day when it was impossible to say the case was measles or rotheln.

The cases seemed to be of particular interest on account of the added vesicular eruption, the mild character of the disease, the geographical location of the patients and the fact that though there were exposures, no other cases resulted.

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**OAK POLLEN ANAPHYLAXIS—REPORT  
OF A CASE\***

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I suppose I should apologize for bringing to you a subject of which I know so little. However, it is my opinion that a large number of the cases of pollinosis, especially the early spring variety, are not recognized as such. Hoping to stimulate a thorough investigation of this obscure condition, I wish to report the following case:

J. K., male, aged 12 years, well nourished, family history negative. Except as follows his general health is apparently perfect: Annually for the last nine years, within a few days of the first of April, his symptoms begin, namely, irritation and injection of the conjunctiva with excessive lacrimation, sneezing, etc. In fact, a typical attack of hay fever.

After the first week of his hay fever, a papular eruption appears on the parts where the skin folds on itself, namely, anterior surface of the neck, elbows, groin and pupliteal spaces. The axillae have never been involved.

In about a week the papules coalesce, forming a weeping eczematous condition, which persists very obstinately for about four weeks.

During this time a considerable bronchitis and some very slight symptoms of asthma have appeared, and he is incapacitated for school work. Superimposed on all this there is a bacterial infection which is followed by a furunculosis which manifests a predilection for the region of the groin and buttocks.

The diagnosis in this case was very difficult for if there were precedents on which to base ideas I have failed to find them.

I consulted several skin men, and they all agree that it was an anaphylactic condition and, on account of the regularity of the recurrences, reasoned that the pollen protein from some of the early spring flora was undoubtedly the cause of the trouble, and that the diagnosis might be made by making cutaneous tests and finding out the particular pollen to which he was hypersensitive.

A great many tests were made and I was finally rewarded with a positive reaction from oak pollen.

After the diagnosis was made I went to work trying to desensitize the patient by giving him 3 minims of a 1-10,000 solution of the pollen protein, which was obtained after a very vexatious delay, from an eastern pharmaceutical house. The dose was increased 2 minims each time, and was given at five-day intervals. Only four doses had been given before his attack began on April 4 this year but with somewhat less severity than the former attacks. I continued the treatment until April 10 and then

sent him to Colorado Springs, having the injections continued there.

It is remarkable how quickly the condition cleared up when he got away from the oak trees. In fact, all symptoms of the condition had vanished within forty-eight hours after his arrival at the Springs. He returned home April 28, after which he had a slight attack and the skin eruption appeared only on the neck for a few days and disappeared with the pollen season, as did the other symptoms.

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**EXTERMINATION OF THE RAT**

In Public Health Bulletin 103, published by the United States Public Health Service, arguments are presented for the elimination of the rat, and methods are given for its destruction. Today the rat is of little, if any, use even in the capacity of scavenger. A conservative estimate is that there are as many rats in the United States as there are human beings, or over a hundred million. The cost of maintenance is estimated at half a cent a day each, or about \$1.82 a year per rat, so that the annual board bill of our rodent population would approximate \$182,000,000.

There are three varieties of rats in American cities, the most common of which is the brown rat, variously known as the Norway rat, barn rat, sewer rat and gray, or wharf rat. The other two varieties are the black rat and the roof, or Alexandrian rat. The two latter species are rarely found in the United States except at seaports. Rats are very prolific, the female producing from three to five litters a year, averaging eight to a litter. They live and breed by preference in excavations and will burrow through soil and almost any kind of building material except cement.

Some depredations committed by rats are almost unbelievable. Lantz, in Public Health Bulletin 30, reports an Iowa farmer who lost in one winter 500 bushels of corn; another farmer who lost in one summer between 300 and 400 chicks; and a Washington merchant from whose stores rats in a period of two weeks carried away seventy-one dozen eggs. Rats are transmitters of bubonic plague, tapeworm, trichina and other diseases.

Rat extermination cannot be carried out successfully in a large city except by compulsory rat proofing buildings. Trapping or poisoning or the use of cats and dogs aids in destroying them. However, partial destruction produces only more favorable conditions for propagation. In rat proofing any building, complete protection of the entire building must be observed, as the smallest opening will permit any building to become badly rat infested. Buildings may be rat proofed either by elevating the structure with open underpinning or by sinking marginal walls of concrete, stone or bricks laid in cement mortar 2 feet into the ground, fitting flush with the floor above. Rat proofing by elevation is applicable only to small buildings. In addition to rat proofing walls, the Public Health Service recommends that all light shafts, ventilators and open windows should be wire screened, garbage should be kept in a metal watertight can having a closely fitting lid, and the ground around the building should be kept clean and free from rubbish and devoid of rat harborage in the form of plank walks and plank covering. Rat proofing laws to be effective should provide explicitly the kind of concrete, thickness of floors and other details as an ineffective rat proofing ordinance is more dangerous than no regulation, since it leads to a feeling of security without adequate protection.

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



# THE JOURNAL

OF THE

## Missouri State Medical Association

OCTOBER, 1919

### EDITORIALS

#### CHILDLESS HOMES DUE TO VENEREAL DISEASE

The tragedy of venereal infection in women was most vividly portrayed in the advance proof of the annual report of the American Social Hygiene Association for 1919, which has just been issued.

Vedder's statistics show that in a general hospital survey 18 per cent. of all the women patients were infected with syphilis or gonorrhea. Seventy per cent. of the married women who were examined and found infected were innocent victims, as they had been contaminated by diseased husbands.

In the brothel district of Pottsville, Pa., a recent survey showed 81 per cent. of women of the underworld had syphilis and the Baltimore red-light district revealed 96 per cent. venereals while the Barbary Coast in San Francisco yielded 97 per cent.; but the climax was found in certain villages in Russia where 100 per cent. of the whole population is syphilitic or gonorrheic—not one person, man, woman or child was free from venereal disease.

These figures are in themselves appalling to any intelligent person while to the medical conscience they must at once suggest the necessity of the same vigorous, concerted action in civilian communities that the medical corps of the Army and that of the Navy made so efficient in war time, if the world is to have its equilibrium of birth rate to the mortality kept established.

Syphilis and gonorrhea always follow war, and we must expect a large increase of these diseases among the general population. But not to quite such a degree will it be spread in America because of the vigorous measures adopted against them as among the other nations at war. Personal prophylaxis and penalties; restricted zones, barring prostitutes from camps; abolition of alcohol have not been so vigorously observed by the Allies as they were by the American authorities.

Various authors give the cause of sterility among married women as between 9 and 30 per cent. due to syphilis or gonorrhea. One French statistician says that in a single year France loses 400,000 lives which should be added to the nation, the loss being due to the scourge of venereal disease.

Abortion and miscarriage must be added to the child mortality due to these causes. In Kansas City and St. Louis about 4 per cent. of all infant mortality is thus accounted for.

Death of syphilitic infants is not always due to the primary disease alone but to malnutrition, intercurrent diseases, traced to the lowered resistance in such a child. If such an infant dies of pneumonia it is not to be supposed that syphilis played no part in the disaster.

It is claimed that 10 to 20 per cent. of all males and 10 per cent. of females are syphilitic. Seventy-five per cent. of the offspring of these parents are infected. The average fetal death in clean families is 9 per cent. In syphilitic it is 30.

A viable syphilitic infant is one where the mother is infected late in her pregnancy. Syphilis is the largest single cause of stillbirth.

Dr. Prince A. Morrow said years ago, "Thousands of young men carry to the marriage bed the germ of venereal disease which is destined to wreck the lives of their wives and children. These result not so much because men are lacking in conscience or sensibility, but because these crimes are perpetrated through ignorance and from false teaching."

In this latter indictment the medical profession is in some degree responsible. Education must be the sheet anchor of dependence in lessening these evils. Instruction should begin in the home. Parents should make companions of their children and in a frank and proper manner talk over the problems of sex and sex relations. It is quite apparent says one writer that children of all classes at an early age recognize the differences of sex and talk of these things. Information is picked up by chance remarks usually wrongly dropped or misinterpreted. These erroneous ideas of the sexual apparatus generally emphasize the sensual as the predominant feature.

Boys talk to each other and doubtless girls as well of things concerning which a morbid hesitancy on the part of the father or mother prevents an expression for fear of doing harm, or on account of a lack of moral courage.

The generative instinct of the young animal unrestrained by nature which protects from excess the lower animals is no doubt often responsible in the human family for the ignorant catastrophe of a child being born outside the marriage bond.

Education will not only reduce disease, but tend to lessen illegitimacy and immorality. Young men should be taught that continence is conducive to health. It will be more forcible if the argument is based on the fact of physical health alone.

There is no safeguard in promiscuous sexual relations. Dr. Osler says, "The unfortunate youth worships Bacchus in the early evening,

Venus later and then pays tribute at the shrine of Mercury for two years."

The misfortune is that it does not end with his own sad experience, but the innocent wife later is exposed to dire disaster.

Seventy per cent. of all cystitis, metritis, Bartholinitis, and salpingitis of married women are due to careless, ignorant, or unscrupulous husbands. Jullien says a general morbid condition gradually involves the whole tract, the general health suffers, the woman drags through weeks of invalidism, the slightest error in diet, exertion or a short walk exhausts her. The result is a childless home in which there is no happiness; this state may drag along for years. Ricord, in 1840, treated a woman whose disease began in 1800, and Deseraux attended, in 1863, an officer who had not been free of urethritis since 1813. A man who had been suffering for ten years and treated unsuccessfully through all the capitals of Europe infected a woman, a patient of Hartmann. The unfortunate woman contracted an acute gonorrhea, urethritis, hemorrhagic cystitis, metritis, double salpingitis, the latter followed by a mutilating operation. So often one hears the statement, "As a young girl my health was fine but since my marriage I have never been strong nor well." It was due to venereal disease.

Noeggerath, in 1872 after a careful survey, maintained that in New York, 800 out of every 1,000 husbands had contracted gonorrhea, and that 90 per cent. of these had not been cured. Van Shaick on examination of a large group of married women, selected in a general survey, found 26 per cent. carriers of gonococcus.

Jullien says it is high time for us doctors to step in and stop this frightful state of affairs. A crusade should be inaugurated which must be continued until results are attained.

In the state of Michigan there is a law which says that a person with syphilis or gonorrhea who attempts to marry is a criminal, and is subject to imprisonment and to pay a fine of \$500 to \$1,000.

How often does this picture present itself. A young man comes to the doctor and says, "Doctor, I am engaged to be married next week. I have developed a discharge which must be cured at once. The marriage must take place or the engagement will be broken." The doctor knows the case cannot be cured in a week and tells the patient so. He advises against such a criminal exposure of an innocent young girl to a horrible disease, and paints the picture in as lurid colors as he can. The reply comes, "I cannot think of giving up this marriage. It would ruin me. The future must look out for itself."

There is no further restraint but the moral one and the crime is perpetrated. What are we to do about it?

Is it an invasion of the rights of the citizen to demand by law a certificate of a reputable physician that such a person is in good health?

Education through prenatal clinics will reach a large number of women, prospective mothers and next to carriers the most numerous victims and potential disseminators of venereal diseases.

Quarantine of known syphilitics, where these women are not kept as prisoners in cells but made to work for their own sake and that of the tax payer as they are able, kept as probationers in homes, or the establishment by health authorities of increased hospital facilities and clinics—these means will tend to lessen the spread of disease.

When we consider the sterile women, the blind children, the misery in the world due to these conditions, we must say, with Clement Cleveland, "To prevent disease is the highest aim of the medical profession." Organization is the secret of effective effort. While we cannot hope for Utopia even with all our endeavors, we can do something to avert in America the damnation which overcame Sodom and Gomorrah.

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#### THE MEDICAL PROFESSION AND MENTAL HYGIENE

For a number of reasons which it is not necessary to go into here the medical profession at large has not been wont to devote a great deal of thought or energy to the question of mental and nervous diseases. Psychiatry has been the backward child of medicine, having been handled as a rule by our medical schools as an unimportant specialty not deserving of a great deal of space in the curriculum. So long as this attitude on the part of our medical schools is maintained it is not surprising, in fact is to be expected, that the graduates in medicine will not be instructed in the importance of mental disorder, nor when they meet with it in their practice will they be prepared to render a desirably adequate service. Among the large majority, mental diseases are looked on as inevitable and incurable. From this viewpoint a certain number of citizens are scheduled to develop a mental disorder and because of it will need care and protection for themselves and the interests of others. Such may be sent to our state institutions and there provided for to whatever extent the institution and the patient's condition will permit. The recent war with the mobilization of enormous man power has brought into extreme prominence the vast importance of the mental factor in efficiency.

Within comparatively recent years the more intense study of mental disorder has brought the conclusion that mental disease is neither inevitable nor incurable; that preventive medicine



has its rôle to play in psychiatry as much if not more than in other branches of medicine. Prophylaxis, prevention and therapy are as important in mental medicine as elsewhere. In other words, mental hygiene is a real, tangible factor in the promotion of health and being so it should be included in the equipment of every practicing physician. Whether a physician's interests are especially directed toward neuropsychiatry is a matter of secondary importance. It is not to the specialist alone that mental hygiene should be of interest. Whatever his special medical inclination may be the physician is first and primarily interested in the question of health in general. He must therefore, to be thorough and complete in his practice, take into consideration the question of his patient's mental health, for if he does not he is neglecting one of the largest and most important factors in human existence.

There is probably no physician who is not interested in what we understand as public health. Likewise there should be no physician who does not interest himself in some degree in the matter of mental health. Especially now when in Missouri we are soon to have the question of mental hygiene brought very prominently before us as a profession, it is particularly desirable that the profession of this state brush up its public spirit and be as ready as possible to assist in the survey to be made by the National Committee for Mental Hygiene and the rehabilitation of the whole question of state care of the insane and feeble-minded which will follow in its wake. The JOURNAL in the past several months has commented on the mental hygiene movement as well as the survey. This has been done for the purpose of keeping the profession in touch with this movement and rallying their assistance and cooperation to the end that mental disease and nervous disorder may come to receive the attention and study they require and that thereby Missouri may take its place among the foremost of the states of the Union where the insane and feeble-minded are cared for and treated in accordance with the ideals of modern medicine.

### THIRD SURVEY OF HOSPITALS

The third survey of hospitals being made under the auspices of the American Medical Association is now well under way. Through an extensive correspondence and a third questionnaire the Association has collected a mass of information on the subject. Much of this material has been tabulated and forwarded to committees in each state representing the state medical associations. Most of the state committees have arranged definite lines of action and by inspection of the hospitals or by other methods

are securing first-hand information by which the data collected by the Association is being carefully checked. The immediate end sought is to provide a reliable list of hospitals which are in position to furnish a satisfactory intern training. The investigation is not limited to intern hospitals, however, but will cover all institutions and the data obtained will be useful in any future action which may be taken in classifying hospitals.

The work in Missouri is in charge of a committee of which Dr. H. E. Pearse of Kansas City is chairman, the other two members being Dr. G. Canby Robinson, Dean of the Washington University Medical School, St. Louis, and Dr. Charles Hugh Neilson, Professor of Medicine at the St. Louis University School of Medicine. The closer relationship which the hospital now bears to the public in the community which it serves makes it all the more important that the service rendered by it shall be excellent in character.

### AMERICAN HOSPITAL ASSOCIATION

The American Hospital Association with its allied associations, viz., the American Dietetic Association and the American Hospital Conference, held the twenty-first annual convention in Cincinnati, September 8 to 12. Other meetings have set a high standard for attendance, interest in the program and number and variety of exhibits, but it remained for the Cincinnati meeting to pass all previous marks and establish a new standard that may not again be equaled for some time.

Last year's meeting at Atlantic City and the previous one at Cleveland were largely devoted to discussing hospital problems with the nation at war. Now that civilization is again firmly riding the saddle, problems of peace and readjustment confront us. Hospitals which had run along for years without an upset of any kind suddenly found themselves without superintendents, staffs depleted, nursing service demoralized, and otherwise disorganized. For nearly two years nothing was thought of or planned for except—win the war. It was won. We are finding it just as difficult to place our institutions back on a peace time organization as it was to put them on a war time basis. Larger and more ambitious programs are planned. Hospital standardization is the foremost subject considered today. Institutional memberships, a larger number of exhibits, a wider scope of action regarding legislative matters, a full time secretary, encouraging the forming of state hospital associations, are but a few of the many important subjects being considered along with the general readjustment of things. These subjects were all discussed in detail.

Hospital standardization is so important that it calls for a separate brief consideration. As was explained by Dr. Warner, the American Hospital Conference grew out of a meeting held last March in Chicago. Representatives from the American Hospital Association, the American Medical Association, the American Public Health Association, the American College of Surgeons, the American Association of Medical Colleges, the Association of Military Surgeons, the Surgeon-General's Office, the American Nurses Association, and other teaching and educational organizations numbering almost a dozen, organized for the purpose of assisting hospitals to improve their service. This plan includes teaching and training nurses and interns; a scheme for better case records and laboratory study; a more thorough and careful examination of the patient; to encourage hospitals to eliminate the untrained physician and the fee splitter; to develop social service departments; and many other ideas which will make better care of the sick possible. One day was given over to the discussion of this all important subject. Dr. Goldwater, of Mt. Sinai Hospital, New York City, opened the program with a paper entitled "The Organization and Function of a Hospital." Dr. John M. Dodson, dean of Rush Medical College, next discussed "Medical Education Through the Visiting Staff and Interns." Mr. John G. Bowman, of the College of Surgeons, closed the morning program with an address on "Better Professional Work Through a Better Staff and Better Records." These papers were given the closest attention and marked the real beginning of organized effort, not to standardize hospitals but to improve the service and maintain higher standards in our hospitals. Eight hundred and forty hospitals of 100 beds and over have been inspected and 175 found to be acceptable.

The mezzanine floor of the hotel was given over to the meeting of the American Dietetic Association. If one can judge by the number of dietitians registered at this meeting he must conclude that there will never be a shortage of persons skilled in dietetics. They were on the job early and late, their meetings instructive and interesting. The American Dietetic Association has come to stay, this being their third annual meeting.

The social side of the meetings of these associations has always been a feature. On Monday evening the exhibits were inspected and old acquaintances renewed. Tuesday evening a reception with music and dancing in the ball room of the Hotel Gibson. Thursday the meetings were held at the new Cincinnati General Hospital. It was a day of both pleasure and instruction. No city can show a finer municipal hospital than Cincinnati. Costing \$4,000,000 and closely allied with the Cincinnati Medical Col-

lege it is a modern teaching institution. Fairly free from politics, it stands today second to none as a municipal institution. During the evening nearly all the members visited the Zoological Gardens. Friday evening the adjournment dinner was held at Hotel Gibson. About 200 attended and Governor Cox was the principal speaker.

There has never been such a splendid line of exhibits as was shown at this meeting. Over 150 firms took advantage of this opportunity to show their products and proper caring of the manufacturers who wish to display their products is one of the problems which confront the Association.

#### POSTGRADUATE MEETINGS

The members throughout the state are anticipating much benefit from the district postgraduate meetings inaugurated by the Council. Three such meetings are scheduled for October, one at Moberly for the Tenth Councilor District, one at Excelsior Springs for the Twelfth Councilor District, one at Cape Girardeau for the Twenty-third Councilor District and other districts in that section of the state and one at Springfield for the Twenty-ninth and surrounding Councilor Districts. The meeting at Cape Girardeau will be held in connection with the Southeast Missouri Medical Society and the one at Springfield will have a session during the meeting of the Southwest Missouri Medical Society. Several other districts are making arrangements to hold postgraduate meetings later in the year.

#### VACCINATE AGAINST TYPHOID

This is the season when typhoid usually shows an increase wherever the water supply, sewerage systems, milk supply and sanitary control of food stuffs are not under strict supervision of the health authorities. It is especially necessary in the rural communities that every means be utilized to prevent an outbreak. One of the most effective measures in the prophylaxis of typhoid is of course vaccination. Physicians should educate the people everywhere to be vaccinated against typhoid and also teach them to maintain hygienic and sanitary control of food stuffs and purify the drinking water.

#### TRUTH IN ADVERTISING

From *Associated Advertising* we clip an interesting announcement made by the Evansville, Ind., *Courier*, establishing that newspaper's advertising policy. When shall we have the privilege of presenting a similar declaration by one or more of the thousand newspapers



published in Missouri? The comment preceding the declaration is from the editor of *Associated Advertising*. The clipping:

#### FIRM AND UNCOMPROMISING FOR TRUTH TELLING

Gradually, but none the less surely, truth in advertising is coming to be recognized as a force making for the advancement of all trade and commerce, and especially for the ultimate and stable benefit of publications that carry advertisements.

An excellent illustration of this, one that will pay other organs as well to follow, is an advertisement recently appearing in the Evansville, Ind., *Courier*. The *Courier* is not alone among newspapers in spreading the gospel of truth in advertising, but the stand it takes is so uncompromising and so clearly stated that its advertisement is reproduced here for the benefit of the craft.

#### TRUTH IN ADVERTISING

We ask that our readers call our attention to any misleading statements that may be made in advertisements in the *Courier*.

Modern business is based on the axiom that honesty is the best policy and real success is founded on truth in business.

The *Courier* will not knowingly permit false or misleading statements to be made in its columns.

The confidence of the readers is jealously guarded. No abuse of it will be permitted.

There are too many good things of life to be advertised, to allow any bad things to get into good company.

We have too high regard for the high-class business men who are using our ads to permit low-class men to associate with them.

A warning is issued to tell the truth and nothing but the truth in advertising.

The affection and confidence our great family of readers have for the *Courier* will be protected from imposition as far as possible.—The Evansville *Courier*.

### OBITUARY

#### ANDREW WILLIAMS MOORE, M.D.

Dr. Andrew Williams Moore of Fayette, a graduate of the St. Louis Medical College, 1884, died at his home, August 18, aged 74 years. He was the oldest physician in Howard County with one exception, Dr. C. W. Watts, the Secretary of Howard County Medical Society, being one year his senior. Dr. Moore was a native of Tennessee but spent most of his life in Missouri and was an active and faithful member of the county and state associations. A few years ago he retired from active practice but was elected an honorary member of the county medical society.

#### BENJAMIN F. HUMPHREY, M.D.

Dr. Benjamin F. Humphrey, Hurdland, a graduate of the College of Physicians and Surgeons, Keokuk, Iowa, 1898, died at his home, Sept. 5, 1919, aged 47 years. Dr. Humphrey

was a member of the Knox County Medical Society and the following resolutions were adopted by that society:

WHEREAS, Our brother and co-laborer, Dr. Benjamin F. Humphrey, has been removed from among us by death; and

WHEREAS, In his death the country has lost an upright, Christian gentleman and the Knox County Medical Society and the medical profession has lost a princely man; therefore be it

Resolved, That the Knox County Medical Society deeply deplores the loss of our fellow member and extends its sympathy to the family of our deceased brother.

J. R. NORTHCUTT,  
U. R. McREYNOLDS,  
GEORGE S. BROWN,  
F. E. LUMAN.

### NEWS NOTES

DR. M. S. McGUIRE of Arrow Rock met with quite a serious accident on August 8 which confined him in the Boonville Hospital for a month and necessitated the amputation of all the toes on his right foot.

A REPUTABLE and intelligent physician is needed at Friedheim, Cape Girardeau County. In the correspondence columns of this issue we publish a letter on this subject from the Reverend Mr. Borchers.

DR. O. S. WILFLEY, formerly of Webb City, has accepted the position of examining medical officer for the Federal Board of Vocational Education for District No. 9 with headquarters at St. Louis. He has accepted a commission in the United State Public Health Service under which service the vocational education is being directed. Dr. Wilfley served in the Medical Corps of the Army during the war with the rank of captain.

DR. NATHANIEL ALLISON of St. Louis, who served in the Medical Corps of the Army during the great war and was recently honorably discharged with the rank of colonel, has again entered active service in the Army with the rank of colonel and has been ordered to Rome as the American representative at the International Congress of Surgery, which will be held in Rome in October. Dr. and Mrs. Allison sailed for Rome September 17 on one of the government transports.

KANSAS CITY BOARD OF HEALTH has established a system of licensing reputable physicians to treat narcotic addicts and is placing restrictions on all physicians in prescribing and administering narcotics. All addicts are required to register with the board and will be assigned

for treatment to the physicians specially licensed to do this work. The authorities are evidently determined to stamp out the narcotic evil in Kansas City, where it has grown to be almost defiant of any legal restrictions through the boldness and effrontery of the addicts and some hardened persons having the legal right to practice medicine.

THE Missouri Society for Social Hygiene will cooperate with the federal government and the Missouri State Board of Health in the fight against venereal diseases. Plans are being made to begin a campaign of education on the evils of venereal diseases and the necessity of isolating infected persons. One of the principal objects of the society will be to agitate the erection of a hospital or enlarge the facilities in existing hospitals for the enforced detention, care and treatment of these cases. The campaign will be inaugurated during the week of October 13 to 20, when the Association of Military Surgeons meets in St. Louis.

WHILE the specialists' store is not a new idea, there being several in the East, it is new for the Middle West and will be a great convenience to those engaged in the practice of eye, ear, nose and throat surgery as it will eliminate sending East for articles formally not obtainable in the home territory. The Merry Optical Company of St. Louis and Kansas City plans to carry a complete line of all instruments for this work, also the enamel ware, furniture and dressings; in fact the stock will comprise everything used by these specialists. Mr. E. C. Davis, who has been for several years associated with the surgical instrument business in this territory, will be in charge of this department.

SIXTY doctors from Marion, Lewis and Pike Counties in Missouri and Adams and Pike Counties in Illinois met at the Sni-E-Carte Club House near Hannibal and organized a Five County Society, Aug. 28, 1919. Dr. E. H. Bounds of Hannibal was elected president and Dr. W. E. Shastid of Pittsfield, Ill., was elected secretary. Dr. R. B. H. Gradwohl of St. Louis read a paper on "Serology of Syphilis." Dr. William Engelbach of St. Louis gave a lantern slide demonstration with lecture on "The Pituitary Gland in Disease." Dr. A. Woelfel of Chicago read a paper on "Radium," and Dr. Joseph Beck of Chicago a paper on "Thyroid." At the close of the program a chicken dinner was served. The society will meet at the same place next year.

FROM the *Journal of the American Medical Association* we learn that the Distinguished Service Cross has been awarded by the command-

ing general of the American Expeditionary Force to several physicians for extraordinary heroism in action in Europe. One of our members, Dr. Ernest W. Slusher of Kansas City, is included in the list. The citation reads: Ernest W. Slusher, Major, Medical Corps, Kansas City, Mo., One Hundred and Fortieth Infantry. For extraordinary heroism in action near Charenteperry, France, Sept. 29-30, 1918. Although severely gassed, he continued on duty until he collapsed twice, and was carried each time to a dressing station. Advised to go to a field hospital for treatment, he waited until he had partially recovered and then returned to duty in the field, working continually among the wounded and exposing himself to hostile fire.

THE forty-fourth annual meeting of the Mississippi Valley Medical Association will be held in Louisville, Ky., October 21 to 23, with headquarters at the Seelbach Hotel. War conditions in 1918 caused the Association to abandon its meeting in that year but the outlook for the coming session promises a very successful meeting. Among the papers on the program are the following by Missouri physicians: Nathaniel Allison, St. Louis, "The Application of the Principles of Treatment of War Fractures to Civilian Surgery." Walter R. Mills and John S. Kimbrough, St. Louis, "The Radium Treatment of Cancer of the Esophagus Under Roentgen-Ray Control." Elsworth S. Smith, St. Louis, "The Role of Vasomotor Response in Hypertension." William Engelbach, St. Louis, "Gonad Insufficiency," with lantern slide demonstration. Henry J. Scherck and William E. Jost, St. Louis, "The Diagnosis and Surgical Treatment in a Series of Urological Patients," with lantern slide demonstration. Dr. F. M. Pottenger of Monrovia, Calif., is president and Dr. L. S. McMurtry of Louisville is chairman of the committee on arrangements.

AN entire general session and two sectional meetings of the eight annual Safety Congress of the National Safety Council, held at Cleveland, Ohio, October 1 to 4, was devoted to discussion of health service in connection with organized accident prevention work. The program of the congress lists 160 speakers, including some of the men most prominent in the practice of industrial medicine. During the nineteen months of our participation in the war with Germany the casualties from accidents in peaceful America were more than twice as great as the casualties among the American troops in France, the statistics of the United States Census showing that more than 70,000 persons died each year as the result of accidents in America. It is estimated that 20,000 of these deaths are caused by industrial accidents and 50,000 by



accidents in the streets and homes. A large number of deaths attributed to accidents result only indirectly from accidents and more directly from causes that can be eliminated by health education. The National Safety Council is therefore giving more and more attention to health education and health service in the war on accidents.

THE Association of Military Surgeons of the United States will hold its 1919 meeting in St. Louis October 13 to 15. Dr. Nathaniel Allison is chairman of the local committee of arrangements and has appointed the following chairmen of subcommittees. Program, Dr. E. L. Opie; Reception, Dr. Walter Fischel; Entertainment, Dr. W. H. Mook; Finance, Dr. H. W. Loeb; Ladies, Dr. V. P. Blair. This is the first meeting of the association since the end of the world war and some questions of considerable importance are expected to be decided during the session. The trustees of the Medical Veterans of the World War will have a meeting in St. Louis during the session and perhaps there will be some affiliation established between the two bodies during the meeting. The president of the Military Surgeons is Dr. Henry P. Birmingham of Washington, D. C.; Secretary and Treasurer, Dr. James R. Church, Washington, D. C. The trustees of the Medical Veterans are Col. F. A. Winter, M. C., U. S. Army; Dr. Hubert Work, Pueblo, Colo.; Dr. Joel E. Goldthwait, Boston, Mass.; Dr. George Brewer, New York City; Dr. John M. Dodson, Chicago, Ill.; Dr. Holman Taylor, Fort Worth, Texas.

THE Springfield Hospital at Springfield, Mo., has purchased and is operating as a neurological department the hospital which was established by the late Dr. S. A. Johnson for the treatment of mental and nervous diseases. This addition to the equipment of the Springfield Hospital affords an opportunity to train their nurses in mental and nervous diseases instead of sending the nurses to other cities to complete that course. The board of managers has also purchased additional property costing several thousand dollars which will be converted into a home for the nurses. Another improvement is the establishment of a modern laboratory which will be under the direction of Dr. Murray C. Stone, who is still in the service with the rank of major but expects to receive his discharge shortly. The enlargement of the Springfield Hospital in this manner was brought about in a peculiar fashion due to the exigencies of war conditions and the anxiety of two members in Springfield to serve their country. After Dr. Johnson died from the effects of an attack by an insane patient Dr. W. R. Summers took charge of the hospital but

was very anxious to enter the service when war was declared. Dr. J. R. Boyd was also looking for an opportunity to serve the country which he could not do in active service because he was over age, so Dr. Summers and Dr. Boyd struck a bargain, namely, that Dr. Boyd was to take charge of the institution while Dr. Summers was away in military service. It is gratifying to relate that the hospital for mental and nervous disease has prospered under Dr. Boyd's direction and not only the city of Springfield but the surrounding territory will be greatly benefited by having hospital facilities for this class of cases in the neighborhood.

THE United States Public Health Service is grading Missouri cities of 10,000 and over for the fight against venereal diseases. St. Louis, Kansas City, St. Joseph and several others have been inspected by representatives of the Public Health Service and graded according to the schedule established by the service. These grades are to be published and will show the comparative activities of all of the cities in the country in combating the venereal menace. It is possible for a city to obtain 1,000 points in the grade by adopting all of the items in the minimum program which follows:

I. MEDICAL MEASURES		Points
1. A free clinic.....		125
2. Facilities for hospital treatment, including facilities for detention and isolation of carriers		50
3. Venereal disease control ordinance or regulations .....		75
4. Elimination of advertising quacks and of the sale of venereal disease nostrums.....		50
Total .....		300
II. EDUCATIONAL MEASURES		
1. Educational placards .....		50
2. Educational pamphlets .....		65
3. Educational books .....		20
4. Educational lectures .....		50
5. Motion pictures .....		65
6. Exhibits .....		50
Total .....		300
III. LAW ENFORCEMENT MEASURES		
1. Law prohibiting prostitution.....		25
2. Rooming-house and hotel licensing law.....		30
3. Dance hall ordinance.....		25
4. Law regulating taxicabs and for-hire automobiles .....		20
5. Adequate detention facilities.....		50
6. Rehabilitation facilities .....		25
7. Institution for feeble-minded.....		25
8. Enforcement of law.....		100
Total .....		300
IV. COOPERATION		
Team work .....		100
Grand total.....		1,000

THE recently created Interdepartmental Social Hygiene Board of the United States Government is in need of a number of specially trained men and women to complete its organization. The United States Civil Service Commission has announced examinations for the following positions: Chief of division for scientific research, \$3,500 to \$4,500 a year; chief of division for educational research and development, \$3,500 to \$4,500 a year; educational assistant, \$2,800 to \$3,600 a year; chief of division of relations with states, \$3,500 to \$4,500 a year; chief of division of records, information and planning, \$3,500 to \$4,500 a year; supervising assistant and inspector, \$2,800 to \$3,600 a year; field agent, \$1,800 to \$3,000 a year. All positions are open to both men and women. Applicants for these positions will not be given scholastic tests in an examination room but will be rated on their education, experience, and writings. Published writings of which the applicant is the author will be submitted with the application. For most of the positions a thesis on one of a number of given subjects will be accepted in lieu of published writings. The receipt of applications will close on November 4. Detailed information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or from the secretary of the United States Civil Service Board at the postoffice or customhouse in any of 3,000 cities. The law creating the Interdepartmental Social Hygiene Board provides for the cooperation of the War and Navy Departments and the Public Health Service of the Treasury Department for the prevention, control, and treatment of venereal diseases. The duties of the Board as set forth in the act are (1) to recommend rules and regulations for the expenditure of moneys allotted to states for the use of their respective boards or departments of health in the prevention, control, and treatment of venereal diseases; (2) to select universities, colleges, or other suitable institutions which shall receive allotments for scientific research for the purpose of discovering more effective medical measures for the prevention and treatment of venereal diseases; (3) to recommend such general measures as will promote correlation and efficiency in carrying out the purposes of the act, and (4) to direct the expenditure of certain moneys appropriated by the act.

## MEMBERSHIP CHANGES, SEPTEMBER

### NEW MEMBERS

Biggs, James B., Bowling Green.  
 Davis, Charles L., Webster Groves.  
 Elmore, J. A., Kansas City.  
 Feaster, Thomas J., Warsaw.  
 Findley, E. M., Graham.

Haughey, George C., Centerview.  
 Holt, Jessie B., Dunlap.  
 McCully, John M., Clarence.  
 Miller, R. P., Kansas City.  
 Parker, Roy H., Hunnewell.  
 Potts, Norris J., Conception Junction.  
 Wallace, Frank B., Holden.

### CHANGES OF ADDRESS

Appleberry, R., Bonne Terre to Farmington.  
 Avery, Walter J., City Hospital, St. Louis, to 110 Forsyth Bldg., Fresno, Calif.  
 Armstrong, C. L., Gore Ave., Webster Groves, to R. R. No. 5, Clinton.  
 Bechtold, Edmond, Barnes Hospital, St. Louis, to 108 E. Washington St., Belleville, Ill.  
 Colby, Buford M., 23d and Cherry St., Kansas City, to 404 Bonfils Bldg.  
 Courshon, A. J., Williamsburg to Springview, Neb.  
 Davies, Leroy W., City Hospital, St. Louis, to 808 Hickory St.  
 DeMenil, Henry N., 3606 Page Ave., St. Louis, to 4103 Easton Ave.  
 Dice, William H., Lowry City to Gentry, Ark.  
 Dorsheimer, G. V., University Hospital, Kansas City, to Dewey, Okla.  
 Dunaway, J. E., Eldorado Springs to Stanchfield, Minn.  
 Elmer, Warren P., 208 Humboldt Bldg., St. Louis, to 618 Univ. Club Bldg.  
 Eudy, W. T., Birch Tree to West Eminence.  
 Fry, C. E., Syracuse to Tipton.  
 Garstang, D. Buie, 417 Wall Bldg., St. Louis, to 224 W. 30th St., Los Angeles, Calif.  
 Glenmon, William P., 3603 Lindell Blvd., St. Louis, to Lister Bldg.  
 Greene, Charles F., West Plains to Box 251, Seneca.  
 Greeson, George A., Lincoln to Windsor.  
 Gundelach, W. J., 501 Delmar Bldg., St. Louis, to University Club Bldg.  
 Hamilton, George McC., Coffman to Thompsonville, Ill.  
 Hatcher, E. D., Fulton to 6 Westport Ave., Kansas City.  
 Hauck, Eugene F., 1703 S. Grand Ave., St. Louis, to 3654 Flora Blvd.  
 Henson, L. L., Ash Grove to Halltown.  
 Heryford, J. R., Sabetha, Kan., to Seward, Neb.  
 Hunt, W. J., Corby-Forsee Bldg., St. Joseph, to State Hospital No. 2.  
 Irwin, Charles B., 901 Sharp Bldg., Kansas City, to 1728 North American Bldg., Chicago, Ill.  
 Kennedy, A. F., 414 Mermod-Jaccard Bldg., St. Louis, to 1232 Hamilton Ave.  
 Kopelowitz, J. C., 4350 Cook Ave., St. Louis, to 5204 Enright Ave.  
 Lowenstein, Paul S., Jewish Hospital, St. Louis, to 603 Metropolitan Bldg.



McConkey, W. F., 4201 Maryland Ave., St. Louis, to 4135 Maryland Ave.

McCulloch, Hugh, 600 S. Kingshighway, St. Louis, to 819 Univ. Club Bldg.

Pierce, Harry M., Florenton Hotel, St. Petersburg, Fla., to 112 Gordon Hurst Ave., Mt. Clair, N. J.

Ruddell, George W., 421 Delmar Bldg., St. Louis, to Lister Bldg.

Russell, R. L. Humansville to State House, Jefferson City.

Schmid, Otto A., 1122 Faraon St., St. Joseph, to 1404 Charles.

Shaw, F. W., Mt. Vernon to 3124 Tracy Ave., Kansas City.

Taylor, Herbert L., New Bloomfield to Central Trust Bldg., Jefferson City.

Van Eman, F. T., 907 Rialto Bldg., Kansas City, to 404 Bryant Bldg.

Weintraub, Solomon A., 324 Metropolitan Bldg., St. Louis, to Univ. Club Bldg.

Wessling, A. L., 3108 Brantner Place, St. Louis, to New Hampton, Mo.

Willfley, Ota S., Webb City to 6133 Pershing Ave., St. Louis.

Williams, L. R., Jonesburg to 4306 DeTonty Ave., St. Louis.

Wilson, V. R., 101 S. 16th St., St. Joseph, to 710½ Felix St.

#### REINSTATED

Heryford, J. R., Seward, Neb.

#### TRANSFERRED

McArthur, Arthur W., Delta, Colo., from Livingston County Medical Society to Delta County (Colo.) Medical Society.

Phillips, Irvin, Picher, Okla., from Dallas County Medical Society to Ottawa County (Okla.) Medical Society.

#### DROPPED

Pomeroy, R. L., Fristoe.

#### RESIGNED

Ramsey, Carey L., Wellsville, Kans.

#### DECEASED

Hudson, E. A., Wellsville.

Humphrey, Benjamin F., Hurdland.

Lee, Herbert, St. Joseph.

Taylor, Britton E., Brighton.

Woods, Peter G., Versailles.

## CORRESPONDENCE

FRIEDHEIM, Mo., Sept. 3, 1919.

*To the Editor:*—Some months ago I solicited your help to obtain a physician for our town here but it is necessary to make another appeal to you because the doctor whom we have called

up to the present and who lives about 10 miles from here intends to move to a larger town, being an elderly man, so that we are left in the lurch again.

My request is, would you put another announcement in the JOURNAL to make known that a doctor is wished for at Friedheim, Mo. You would confer a great favor on us if you would do so.

Anyone wishing to know more about this place can be referred to me, Rev. W. C. Borchers, or to Mr. W. M. Klaus, Friedheim, Mo.

If you can do this for us we would certainly appreciate it very much.

Very respectfully,

W. C. BORCHERS.

## MENTAL HYGIENE SOCIETY

St. Louis, Mo., Sept. 17, 1919.

*To the Editor:*—The interest and attention which the JOURNAL has shown in the mental hygiene movement and the proposed survey of the state of Missouri by the National Committee for Mental Hygiene has been very gratifying and I wish to thank you for the assistance which you have thus given in bringing this matter before the members of the Missouri State Medical Association. As mental hygiene is of course primarily a medical problem it is for the medical profession to handle. It may not be known to the Missouri profession that there is the Missouri Society for Mental Hygiene, the representative state organization affiliated with the National Committee for Mental Hygiene. I would appreciate it if you could give this letter space in the JOURNAL and thus inform the profession of the existence of the Missouri Society for Mental Hygiene and extend to all an invitation to become members, which they may do on application to the undersigned.

F. M. BARNES, JR., M.D., Secretary,  
Missouri Society for Mental Hygiene.

University Club Building.

## PREVENT BLINDNESS

*To the Editor:*—The Missouri Commission for the Blind and the Missouri Association for the Blind desire to express their appreciation to the medical profession of the state for its active interest and generous assistance in proposed legislation for the prevention of blindness.

It is not surprising that the bill was not enacted when first proposed. In fact, as for most measures promoting the health and welfare of the people, it is necessary to conduct a persistent campaign of education before the legislative bodies can be convinced that the benefits conferred are real and that the regulations required will not prove irksome.

The greatest single source of needless blindness is found in the inflammation of the eyes of the newly born. This is easily explained when the delicacy of the essential ocular tissue and its unavoidable exposure is considered. In fact, a relatively slight ulceration, so small that it would be unnoticed in any other tissue of the body, may, if centrally located on the cornea, produce irreparable and permanent damage to the eyesight of the infant. Prophylaxis in this instance is therefore incomparably better than belated efforts to mitigate or cure.

Happily for those whose homes they attend, the members of the Missouri State Medical Association do not need to be told these truths. They are only a chapter out of the abundant experience with which the physicians are constantly enriching our knowledge of the best way to obtain good health and happiness. We must bring more of these truths to the attention of the general public, with abundant publicity and constant reiteration.

The percentage of blindness due to babies' sore eyes has been reduced from 25 to approximately 15 per cent. Can we rest content with this figure when Massachusetts has entirely eradicated blindness from this source? Massachusetts has a law making the use of a prophylactic compulsory in every case. If such a law can prevent needless blindness in that state we must and shall have it in Missouri. To that end the Committee on Prevention of Blindness will welcome suggestions from your members. Conferences will be held this fall in various cities and the result will be reported through the JOURNAL. The active cooperation of every member of your Association is earnestly desired and it will be greatly helpful.

Very sincerely,

ANNA F. HARRIS, Secretary,  
Missouri Commission for the Blind.

## MISCELLANY

### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY AND NAVY

Avery, Walter, St. Louis (Navy).  
Blakemore, J. M., St. Louis; Blanks, C. L., Mexico;  
Box, E. M., Springfield; Burst, E. A., St. Louis.  
Caldwell, J. C., Laclede; Costolow, W. E., Kirksville.  
Dail, O. C., Kansas City; DeVereaux, J. J., Hawk Point; Donahue, J. C., St. Louis.  
Esselbruegge, Frederick C., St. Louis.  
Garstang, D. Buie, St. Louis; Gibson, R. H., St. Louis; Gomien, S., St. Louis; Gregg, C. P., St. Louis; Greever, B. L., Monett (Navy).  
Haas, F. F., St. Louis; Haley, R. R., Brookfield; Harbour, S. C., St. Louis; Hess, H. L., Kansas City; Higdon, E. F., Richmond.  
Jacobs, M. W., St. Louis; James, F., Sheldon; James, L. S., Blackburn; January, C. C., Jacksonville.  
Kirchner, W. C. G., St. Louis.  
Lawrence, W. S., St. Louis; Leighton, W. E., St. Louis; Luton, L. S., St. Louis.

Monahan, E. P., Kansas City; Munson, C. L., St. Louis; Murrell, R. E., Kirkwood; Myerdick, Albert H., St. Louis.

Olmsted, William H., St. Louis.  
Parrish, I. N., Cowgill; Pim, L. T., St. Louis.  
Saenger, N., St. Louis; Scheff, A. L., St. Louis.  
Tunnell, J. D., Reger.  
Urbanowski, L. V., St. Louis.  
Wenger, O. C., St. Louis; Wennerman, S. F., St. Louis; Wessling, A. L., New Hampton; Wyer, H. G., Kirkwood.  
Young, N. A., St. Louis.

### THE ART OF HEALING

Thomas Speed Mosby, the gifted Missourian who edits and manages Mosby's *Missouri Message*, says that "life is a compound of parasites and bacteria" and that "we presume too much if we hope to exterminate them without extinguishing ourselves." They constitute a numerical majority at all times and the most that we can expect to do in the conflict between man and these invisible enemies is to establish a sort of entente cordiale and maintain the status quo, says Mr. Mosby. If we can only hold them despite their large numerical majority "in a state of innocuous passivity like the negro vote in the South they are harmless." On this basis, he declares, "the art of healing is mainly erected." After some characteristically philosophical observations on the limitations of medicine and the medical practitioner, Mr. Mosby estimates the public worth of the physician and the public's estimate of the worth of the physician in a manner that admits of no doubt concerning his admiration for the members of the guild. We quote further:

"How are we to know when we are sick what ails us without the doctor's diagnosis? The doctor may not always be able to tell what you have; but he takes it, anyway. Medical attention, however, is worth all it costs. If you don't believe it, buy some. No other professional or laboring man will come at your beck and call, as the doctor does. The plumber says he'll be there next week, the paper-hanger will come when he gets ready, and your lawyer asks you to come to his office, or wait until tomorrow. But the doctor comes, every time, and when he does come he is just as likely to bring the stork with him as anything else. What though his pellets be but bread and cheese, his powders naught but ineffective dust? They are worth the money. If you doubt it, go and hire a lawyer, or a cook, or an undertaker, and see what you get out of the investment.

"The physician encounters more hopeless misery and unutterable woe than all the other trades and professions combined. You'll find him everywhere; now among his star patients, who really pay him what they owe; now doing a thankless job of surgery in some public hospital, or bending over the form of some lone woman, dying in a garret; but through the gloom he gleams like a sunbeam in a fog; his urbanity is never lost, and his patience, like the celestial virtue, endureth forever. We know that he swears sometimes; that he is not a saint; that, oftener than otherwise, he professes no religion; but when he enters the sick room, although you cannot see the aureole, you may almost hear the sad, sweet words, grown mellow in the echoes of two thousand years: 'In the world ye shall have tribulation; but be of good cheer; I have overcome the world.' My son, be a doctor, if you will; 'tis a noble and generous calling. But if trouble is all you are looking for, why not go out and hang yourself at once?

"When Frederick the Great threatened, if defeated in his next battle, to abdicate and go to Venice and practice medicine, one of his generals inquired: 'Toujours assassin?' But there may be, and no doubt



there often is, assassination without either surgery or medicine. Men are often cured or killed by methods quite the reverse of scientific. The favorite method of the school of Hippocrates is torture. Thus, they will cut off a man's supply of tobacco in the most flippant and cruel manner. If he be fond of meat, he must shun it as he would the plague. For the man who likes his rocker and his sofa they prescribe the most horrid exertions. If one, perchance, display a weakness for athletics, it's back to the arm-chair for him—to save his heart."

#### A SIDE-LIGHT ON PATENT MEDICINE ADVERTISING

A few moments of light reading is often refreshing to the mind of the busy physician when he is not studying weightier problems, so we take the following from an article by Mr. N. A. Huse, published in the Bulletin of the University of Missouri, on a subject that is not entirely foreign to the practitioner of medicine in rural communities. Those among our members who are acquainted with the editor of the county newspaper may chuckle good humoredly if they happen to know that "ye editor" had been gulled in the fashion described. Mr. Huse is advocating organization among the editors of county newspapers, particularly in the matter of advertising contracts, and in the course of his argument he says:

"In the old days about the only foreign advertisers who used country newspapers were patent medicine people and their method of buying space was unscrupulous and piratical. A former traveling salesman for one patent medicine house recently showed me a little book of instructions issued by his house to all its traveling salesmen, teaching them how to buy space in a country newspaper. The salesman was instructed, after arriving in a town, to go to the best hotel and get a good night's sleep. He was to have a good breakfast in the morning and a clean shave, and then, physically fit, he was to visit the newspaper office and call for the editor. He was instructed to greet the editor with a glad hand and a smile and to start proceedings by telling a funny story. Then he was to draw from his inside coat pocket a card about 6 inches long and 4 inches wide, on which were printed five patent medicine readers. On the card these were printed in 5 point type and in a measure 18 ems wide, but the psychology of this small card was to make the editor think that these readers would only occupy about 5 inches of space in his paper. He would forget that the card was set in small type and in wide measure and would overlook the fact that this same matter, when set in 13 em measure and in 9-point type would occupy fully 15 inches of space. The salesman was instructed to toss this card down on the desk in front of the editor and say: 'How much will you take to run this copy for us for three years?'

"The editor, by mental arithmetic, figured out what 5 inches of space every issue for three years would cost at his regular rate—which might have been 4 cents an inch—and then, rather sheepishly, would announce that the regular rate would run to \$37.80. At this juncture the salesman was instructed to throw up his hands in holy horror and to shout: 'Great God, man, I don't want to buy your paper!' After the effect of this had sunk in, the salesman would say: 'Now, I'll tell you what we'll do. We can afford to pay you \$27.85 to run this small piece of copy three years. This is just so much velvet to you—it is so much outside money that you would not get otherwise, and it doesn't cost you anything because you are publishing the paper anyway and it helps you fill up holes and saves your buying plate. We know from our records just how much medicine we can sell in this town and \$27.85 is really more money than we are justified in spending in advertising in your paper, but we are willing to take something of a

gamble. I can run this advertising in the paper across the street but I would like to give it to you. What do you say?'

"Then if the publisher demurred the salesman was to pick up the card and propose: 'Well, I'll tell you what we'll do. We'll cut out reader No. 2 and reader No. 4 and you run 1, 3 and 5 and I'll pay you \$18.05 for that.' The salesman's instructions were to juggle the proposition in every possible way so as to muddle the mind of the editor and at last if the editor still refused—which he seldom did—the salesman was instructed to seize his hat, jam it on his head, and with an angry air, stalk to the door and say, as he slammed it on his way out: 'You have had your chance; you have got nobody to blame but yourself for losing this money; goodbye!' Then the salesman was instructed to walk around four blocks and come back. By that time the editor would be so disconsolate and downhearted over losing the \$27.85 that he would gladly put his name on the dotted line to run all five readers for three years for \$17.20—and then the patent medicine house would steal the \$17.20 because of wrong insertions."

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1919

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

- Madison County Medical Society, Dec. 14, 1918.
- Webster County Medical Society, Dec. 23, 1918.
- Cedar County Medical Society, Dec. 30, 1918.
- Pike County Medical Society, Jan. 8, 1919.
- Vernon County Medical Society, Jan. 20, 1919.
- Chariton County Medical Society, Jan. 25, 1919.
- Wayne County Medical Society, Feb. 12, 1919.
- Camden County Medical Society, Feb. 14, 1919.
- Atchison County Medical Society, Feb. 26, 1919.
- Ralls County Medical Society, Feb. 27, 1919.
- Ste. Genevieve County Medical Society, Feb. 27, 1919.
- Nodaway County Medical Society, March 24, 1919.
- Laclede County Medical Society, March 31, 1919.
- Oregon County Medical Society, April 7, 1919.
- Cass County Medical Society, April 16, 1919.
- Adair County Medical Society, April 17, 1919.
- Cape Girardeau County Medical Society, May 8, 1919.
- Newton County Medical Society, May 12, 1919.
- Carroll County Medical Society, July 2, 1919.
- Greene County Medical Society, July 2, 1919.
- Clay County Medical Society, July 8, 1919.
- Johnson County Medical Society, Aug. 20, 1919.
- Pettis County Medical Society, Aug. 25, 1919.
- Dallas County Medical Society, Sept. 11, 1919.
- Dent County Medical Society, Sept. 17, 1919.

### BENTON COUNTY MEDICAL SOCIETY

The Benton County Medical Society met at Cole Camp on Friday, September 12, at 4 p. m. Dr. E. L. Rhodes of Lincoln was elected president pro tem and called the meeting to order. After disposing of the regular order of business, the election of officers was held, resulting as follows for the balance of 1919 and 1920: president, James A. Logan, Warsaw; vice president, Thomas S. Reser, Cole Camp; secretary and treasurer, John R. Smith, Warsaw; delegate, Eli L. Rhodes, Lincoln; alternate, James P. Van Allen, Cole Camp; censor, three years, O. L. Cuddy of Lincoln; censor two years, James M. Edwards, Fairfield.

The next in order was the payment of dues, after Dr. T. J. Feaster of Warsaw was recommended and elected by a unanimous ballot, he being a former member of the Hickory County Medical Society.

Those present at the meeting were: Drs. J. P. Van Allen, Thomas S. Reser and Harry Bay of Cole Camp; Dr. Eli L. Rhodes of Lincoln; Dr. James M. Edwards of Fairfield; Drs. Edmond F. Haynes, Thomas J. Feaster, James A. Logan, Horace G. Savage and John R. Smith of Warsaw.

Since our last meeting (which I am sorry to say was in December, 1917) Dr. J. W. Clark of Frislow died of heart disease; Dr. G. A. Greeson of Palo moved to Windsor, and Dr. R. L. Pomeroy has been dropped from our list for nonpayment of dues, so that our ranks have been reduced somewhat but with the addition of one more energetic member we have resumed business at the old stand and will try to see that 1920 brings forth better work and results than any former year.

The meeting closed with the understanding that the next meeting would be held in Warsaw the early part of December with a good program and some invited guests and end with a banquet for all present.

J. R. SMITH, M.D., Secretary.

#### CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, September 11, at 1:30 p. m. The meeting was called to order by the president, Dr. A. R. Elder, and the following members were present: A. R. Elder, president; H. S. Crawford, secretary; H. A. Brierly, W. F. Chaffin, F. E. Dargatz, H. Jerard, M. P. Overholser, R. D. Ramey and J. S. Triplett.

The program was as follows: Symposium on Medicine: 1. Medicine of the Past, Dr. R. D. Ramey; 2. Medicine of the Present, Dr. H. Jerard; 3. Medicine of the Future, Dr. H. S. Crawford.

After all the papers were read all members present took part in a very interesting discussion of the entire subject. The matter of agitating the building of a county hospital was discussed and the question will be taken up through other channels. Good hospital facilities at home will effect a large saving and be a great convenience to our people.

The program was closed by the presentation of a clinic by Dr. W. F. Chaffin of Raymore. This was a very interesting case and the members took great interest in examining it. This is a very interesting feature of our programs and we hope that we may have several cases at each meeting in the future.

This was the best meeting the society has held since the close of the war and it shows a renewed interest in the county society but there are still some familiar faces that have not been seen at the meetings as yet. We hope they will be out at our next meeting.

H. S. CRAWFORD, M.D., Secretary.

#### MACON COUNTY MEDICAL SOCIETY

The Macon County Medical Society convened in regular session at Macon, September 8, in the office of Dr. Smith. Members present: Drs. A. L. Cambre, F. W. Allen, William A. Welch, T. P. Gronoway, L. M. Thompson, George F. Brewington, C. W. Reagan, E. S. Smith, W. H. Miller and A. B. Miller.

The regular program was taken up and six Cabot clinics were discussed by as many clinicians and a general discussion by the members. The meeting was interesting, instructive and profitable. This Cabot clinic is the most practical thing we have ever tried. We always have a good program and a profitable meeting and our members are learning that all important art of history taking.

We decided to vary the order for our next meeting by taking up endocrine therapy. Dr. Cambre will present the physiology of the ovarian and thyroid

secretion. Dr. Allen the pituitary secretion. Dr. W. H. Miller the mammary and placental secretions. Dr. Smith the endocrins and sterility. Dr. Gronoway the interrelationship of the endocrine secretions. The meeting will be held at Macon on October 11, at 2 p. m., in the secretary's office.

A. B. MILLER, M.D., Secretary.

#### ST. LOUIS COUNTY MEDICAL SOCIETY

The Society was called to order by the president at 4 p. m., September 10. There not being a quorum present at the meeting of August 13, the minutes of the meeting of July 9 were read and approved.

A transfer card of membership from the Crawford County Medical Society of Illinois for Dr. Charles L. Davis of Webster Groves was read and he was received into membership.

A communication was read from the State Board of Health asking for two volunteers to serve in co-operation with the United States Public Health Service during the anticipated influenza epidemic the coming fall and winter in case their services are required.

There being no literary program, the Society adjourned to the next regular meeting.

A. CONWAY, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1919, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**BARBITAL SODIUM-ABBOTT.**—A brand of barbitol sodium which complies with the New and Nonofficial Remedies standards. Barbitol sodium is the soluble sodium salt of barbitol (veronal). Barbitol sodium was first introduced as veronal sodium and medinal. For a discussion of the actions, uses and dosage of barbitol sodium see New and Nonofficial Remedies, 1919, p. 83. The Abbott Laboratories, Chicago.

**OVARIAN SUBSTANCE-HOLLISTER-WILSON.**—The entire fresh ovary (including the corpora lutea) of the hog, cleaned, freed from fat, dried and powdered. It contains no diluent or preservative. For a discussion of the actions and uses of ovary preparations, see New and Nonofficial Remedies, 1919, p. 202. The dose is from 0.06 to 0.2 Gm. (1 to 3 grains). The Hollister-Wilson Laboratories, Chicago.

**DESICCATED CORPUS LUTEUM-HOLLISTER-WILSON.**—The fresh substance from the corpora lutea of the hog, dried, freed from fat and powdered. It contains no diluent or preservative. For a discussion of ovary preparations, see New and Nonofficial Remedies, 1919, p. 202. The dose is from 0.03 to 0.12 Gm. (½ to 2 grains). Hollister-Wilson Laboratories, Chicago.

**SODIUM DIOXIDE, DENTAL-R. AND H.**—A brand of sodium peroxide complying with the New and Nonofficial Remedies standards, but containing at least 90 per cent. of sodium peroxide, and iron not to exceed 0.006 per cent. For a discussion of the actions and uses of sodium peroxide, see New and Nonofficial Remedies, 1919, p. 216. Roessler and Hasslacher Chemical Co., New York (*Jour. A. M. A.*, Aug. 23 1919, p. 607).

**B. COLI BACTERIN (SPECIAL BACTERIAL VACCINE No. 12).**—A colon bacillus vaccine (see New and Nonofficial Remedies, 1919, p. 283), marketed in 10-Cc. vials, each cubic centimeter containing 5,000 million killed *Bacillus coli*. Fred I. Lackenbach, San Francisco.



**GNOCOCCUS BACTERIN (SPECIAL BACTERIAL VACCINE No. 9).**—A gonococcus vaccine (see New and Nonofficial Remedies, 1919, p. 285), marketed in 10-Cc. vials, each cubic centimeter containing 1,000 million killed *Gonococcus*. Fred I. Lackenbach, San Francisco.

**STAPH-ACNE BACTERIN (SPECIAL BACTERIAL VACCINE No. 6).**—A mixed bacterial vaccine (see New and Nonofficial Remedies, 1919, p. 296), marketed in 10-Cc. vials, each cubic centimeter containing 500 million killed *Staphylococcus albus*, 500 million killed *Staphylococcus aureus*, and 50 million killed *Bacillus acne*. Fred I. Lackenbach, San Francisco.

**WHOOPING COUGH BACTERIN (SPECIAL BACTERIAL VACCINE No. 14).**—A pertussis bacillus vaccine (see New and Nonofficial Remedies, 1919, p. 287), marketed in 10-Cc. vials, each cubic centimeter containing 2,000 million killed *B. Pertussis*. Fred I. Lackenbach, San Francisco.

**STAPHYLOCOCCUS BACTERIN (SPECIAL BACTERIAL VACCINE No. 1).**—A staphylococcus vaccine (see New and Nonofficial Remedies, 1919, p. 289), marketed in 10-Cc. vials, each cubic centimeter containing 2,000 million killed *Staphylococcus albus*, 2,000 million killed *Staphylococcus aureus*, and 1,000 million killed *Staphylococcus citreus*. Fred I. Lackenbach, San Francisco.

**STREPTOCOCCUS BACTERIN (SPECIAL BACTERIAL VACCINE No. 10).**—A streptococcus vaccine (see New and Nonofficial Remedies, 1919, p. 291), marketed in 10-Cc. vials, each cubic centimeter containing 1,000 million killed *Streptococcus*. Fred I. Lackenbach, San Francisco.

**TYPHOID BACTERIN (SPECIAL BACTERIAL VACCINE No. 17).**—A typhoid vaccine (see New and Nonofficial Remedies, 1919, p. 292), marketed in 10-Cc. vials, each cubic centimeter containing 1,000 million killed *B. Typhosus*. Fred I. Lackenbach, San Francisco.

**TYPHOID-PARATYPHOID BACTERIN (SPECIAL BACTERIAL VACCINE No. 13).**—A typhoid vaccine (see New and Nonofficial Remedies, 1919, p. 292), marketed in 10-Cc. vials, each cubic centimeter containing 1,000 million killed *B. Typhosus*, 750 million killed *B. Paratyphosus* "A" and 750 million killed *B. Paratyphosus* "B." Fred I. Lackenbach, San Francisco.

**TETANUS ANTITOXIN-FOR HUMAN USE: PURIFIED, CONCENTRATED (GLOBULIN).**—A concentrated tetanus antitoxin (see New and Nonofficial Remedies, 1919, p. 266), marketed in syringes containing 1,500 and 5,000 units; in ampules containing 10,000 units, with apparatus for injection. Eli Lilly and Co., Indianapolis, Ind. (*Jour. A. M. A.*, Aug. 30, 1919, p. 691).

### PROPAGANDA FOR REFORM

**ARSENOVEN S. S. AND SOLUTION OF ARSENIC AND MERCURY NOT ACCEPTED.**—The Council on Pharmacy and Chemistry reports that Arsenoven S. S., sold by the S. S. Products Co., Philadelphia, and Solution of Arsenic and Mercury (formerly called Arseno-Meth-Hyd) of the New York Intravenous Laboratory, New York, are inadmissible to New and Nonofficial Remedies because unwarranted therapeutic claims are made for them and because the names are not descriptive of the composition of these preparations. Arsenoven S. S. is claimed to contain dimethylarsenin 15.4 grains, mercury biniodid  $\frac{1}{10}$  grain, sodium iodid  $\frac{1}{2}$  grain. Dimethylarsenin is asserted to be similar to sodium cacodylate, but with a more pronounced therapeutic action. Solution of Arsenic and Mercury comes in three dosages, 2 gm., 1.5 gm., and 0.7 gm., respectively. The 2 gm. form is claimed to contain 2 gm. (31 grains) of sodium dimethylarsenate (cacodylate), U. S. P., and mercury iodid 5 mg. ( $\frac{1}{12}$  grain) in 5 c.c. of solution. Both preparations are advised for the treatment of syphilis, intravenously. The report of the Council reminds physicians that cacodylates have been found inefficient as spirochete-

cides and warns against the abuses—often dangerous—to which patients are frequently subjected when "intravenous therapy" is employed (*Jour. A. M. A.*, Aug. 2, 1919, p. 353).

**HORMOTONE AND HORMOTONE WITHOUT POST-PITUITARY.**—The Council on Pharmacy and Chemistry reports that Hormotone of the G. W. Carnrick Company is advertised as "A pluriglandular tonic for asthenic conditions." The same firm also advertises Hormotone Without Post-Pituitary for use "in neurasthenic conditions associated with high blood pressure." These preparations are sold in the form of tablets for oral administration. Each tablet of Hormotone is said to contain 1-10 grain desiccated thyroid and 1-20 grain of entire pituitary together with the hormones of the ovary and testes—the amounts and the form in which the latter are supposed to be present are not given. From this it is seen that the only definite information given the medical profession regarding the composition of Hormotone is that it is a weak thyroid and a still weaker pituitary preparation. Hormotone without Post-Pituitary is said to contain in each tablet 1/10 grain desiccated thyroid, and to "present" "hormone bearing extracts of thyroid, anterior pituitary, ovary, and testes." The Council declared these preparations inadmissible to New and Nonofficial Remedies, because: (1) Their composition is semisecret; (2) the therapeutic claims are unwarranted; (3) they are sold under names not descriptive of their composition, but suggestive of their indiscriminate use as "tonics"; (4) in the light of our present knowledge, the routine administration of pluriglandular mixtures is irrational (*Jour. A. M. A.*, Aug. 16, 1919, p. 549).

**BROMIDE AND ACETANILID COMPOUND.**—The period of acceptance having expired for Granular Effervescent Bromide and Acetanilid Compound-Mulford, the Council on Pharmacy and Chemistry directed its omission from New and Nonofficial Remedies because an examination of the available evidence demonstrated that mixtures of this kind are inimical to rational medicine and the public. The use of mixtures of bromide and acetanilid in fixed proportions is irrational and prone to induce their indiscriminate use by the public—and this despite the perfectly frank declaration of the composition of this mixture by the manufacturer (*Rep. Coun. Pharm. Chem.*, 1918, p. 58).

**HOLADIN AND BILE SALT MIXTURES.**—The period of acceptance having expired, the Council on Pharmacy and Chemistry decided to omit the following mixtures from New and Nonofficial Remedies: Holadin and Bile Salts-Fairchild, Capsules of Bile Salts, Succinate of Soda and Phenolphthalein-Fairchild, Capsules of Holadin, Bile Salts and Phenolphthalein-Fairchild; Capsules of Holadin, Succinate of Soda and Bile Salts-Fairchild. The Council holds that these mixtures are superfluous and that the several substances of which they are composed should be used singly, or at most with greater attention to the individual requirements of the patient than is possible when these fixed mixtures are prescribed. Despite that these mixtures have been in use for more than nine years, there is no satisfactory evidence that they possess any advantage over the simple laxatives, or the preparations of bile or pancreatic extract. The dismissal of the holadin and bile salt mixtures does not involve the question of the usefulness of holadin or of bile salts alone. On the contrary, the possible usefulness of these preparations is admitted and they are retained in New and Nonofficial Remedies. It is the combination of holadin, bile salts, sodium succinate and phenolphthalein to which objection is made by the Council (*Rep. Coun. Pharm. Chem.*, 1918, p. 59).

**POLLEN ANTIGEN.**—Pollen antigen-Lederle is a pollen extract which represents the pollen of plants blooming in spring and in fall. The Council on Pharmacy and Chemistry declared these preparations inadmissible to New and Nonofficial Remedies be-

cause there appeared no warrant for complex pollen preparations representing both spring and fall pollens. In consideration of the essentially experimental status of the use of pollen preparations for the prevention and treatment of "hay-fever," such products should be as simple as possible. Hence pollen protein preparations prepared from the pollen of two or more species of plants are accepted for New and Nonofficial Remedies only if there is evidence that the given combination is rational (*Rep. Coun. Pharm. Chem.*, 1918, p. 65).

**RESTORIA.**—"Restoria for Bad Blood" is sold by the Restoria Chemical Company of Kansas City, Mo. It is sold as a sure cure for syphilis, but is also recommended for rheumatism, kidney trouble, lumbago, eczema and catarrh. The A. M. A. Chemical Laboratory reports that Restoria contains no mercury or arsenic but does contain iodid, probably as potassium iodid, equivalent to 1.693 gm. per 100 Cc. It also was found to contain much vegetable extractive, some alkaloidal drug and a bitter oil or oleoresin (*Jour. A. M. A.*, Aug. 9, 1919, p. 438).

**CINCHOPHEN: FORMERLY ATOPHAN.**—The Chemical Foundation, Inc., which has purchased some 4,500 German-owned patents, many of them for synthetic drugs, proposes to continue the wise policy of the Federal Trade Commission by requiring that those who receive licenses for the use of patents for synthetic drugs must use a common designation for each drug selected by the foundation. Cinchophen has been selected as the designation for the substance introduced as atophan (also described in the U. S. Pharmacopoeia under "phenylcinchoninic acid"). In consideration of this action on the part of the Chemical Foundation and also because physicians found it difficult to use the pharmacopoeial name phenylcinchoninic acid, the Council on Pharmacy and Chemistry has recognized the contracted term cinchophen as the name for the drug introduced as atophan (*Jour. A. M. A.*, Aug. 9, 1919, p. 427).

**CAPPELL'S UROLUETIC TEST.**—A "Doctor" H. F. Matthews, representing the Capell Laboratory, Omaha, is demonstrating an asserted new test for syphilis—Capell's Uroluetie Test. J. O. Cobb, M.D., Senior Surgeon in Charge U. S. Marine Hospital, Chicago, writes that in a demonstration of the test (which is to be applied to the urine of patients) "Doctor" Matthews was given the same specimen of urine in four different containers, and he read a different degree of reaction for each of them. Capell's Laboratory is apparently conducted by Dr. W. L. Capell. Some years ago, Dr. Capell was connected with a concern known as "Acneine Pharmacal Company." In 1917, W. L. Capell was connected with Capell, Cameron Co., Inc., which was selling "Capell's Uroluetie Test," "Capell's Treatment for Syphilis" and other remedies. The treatment for syphilis (mercurodin) is sold by Capell's Laboratory. It also sells Acneine, which apparently is the same product that was sold in 1906 under the name "Sambu-Co" by the Holtman-Stringer Co. of Omaha. While the Capell Laboratory still sells proprietaries, it appears to be reaturating the "Uroluetie Test" at the present time. The test would be important if it was reliable; unfortunately its scientific value to the sufferer is negligible, compared with its economic value to the exploiter. It is not so much a test for syphilis in the patient as of credulity in the doctor (*Jour. A. M. A.*, Aug. 23, 1919, p. 626).

**THE USES OF YEAST.**—Yeast is one of those remedies that have undergone alternanating cycles of use and of disuse; just at present it appears again to be in its ascendancy. Recently renewed attention has been called to its laxative qualities. The much debated question whether yeast can be used as a food, can be answered in the affirmative. However, in view of its laxative action, the amount of yeast which can be

ingested is limited. Also, owing to its high nucleic content it is contraindicated in gout. As a source of water soluble growth promoting as well as anti-neuritic vitamin, yeast has become thoroughly established. However, as common foods contain this vitamin, there is little likelihood of its proving of therapeutic value, since it promotes growth only when stunting is due to lack of vitamins. Yeast has been used as an application in acne, for infected wounds and in leukorrhea. Recently the curative value of the oral administration of yeast in various cutaneous disorders has been reasserted (*Jour. A. M. A.*, Aug. 23, 1919, p. 628).

**THE COUNCIL ON PHARMACY AND CHEMISTRY.**—The profession should recognize that the most important factor in the clearing up of the advertising pages of medical journals has been the Council on Pharmacy and Chemistry of the American Medical Association. The Council has been criticized both by the manufacturer and the profession, but it has gone on doing the work for which it was created. Sometimes the practitioner feels that his clinical experience justifies the use of a preparation which the Council has not found reason to accept. While apparent clinical results may be misinterpreted, the carefully conducted examination of the Council are likely to be definite and dependable. We are becoming more and more convinced of the unreliability of reports of clinical use by physicians. Practitioners should avail themselves of the Council's investigations by frequent reference to the reports of the Council. If they could keep on hand a copy of New and Nonofficial Remedies for ready reference and prescribe only of the new preparations those that have been accepted by the Council, they would aid materially in the establishment of a scientific and reliable therapeutics (*Jour. Kansas Med. Soc.*, August, 1919, p. 193).

**S. S. S.**—The state of Louisiana has a law prohibiting the sale of venereal disease remedies, except on the written prescription of a licensed physician. In May of this year, the Bureau of Venereal Diseases of the Louisiana State Board of Health notified the druggists of Louisiana that the sale of "S. S. S." ("Swift's Syphilitic Specific" or "Swift's Sure Specific") would meet with the same law enforcement measures as were being waged against any venereal disease nostrum. The result of this notice was a letter sent to various drug stores of Louisiana by the sales manager of the Swift Specific Company declaring that "S. S. S." is not recommended or advertised as a venereal medicine. A few years ago "S. S. S." was boldly heralded in newspaper advertisements as a "cure" for syphilis (*Jour. A. M. A.*, Aug. 30, 1919, p. 707).

## BOOK REVIEWS

**PSYCHIATRIC-NEUROLOGIC EXAMINATION METHODS.** With Special Reference to the Significance of Signs and Symptoms. By Dr. August Wimmer, Director St. Hans Hospital, Roskilde, Near Copenhagen, Denmark. Authorized translation by Andrew W. Hoisholt, M.D., Medical Superintendent, Napa State Hospital; Professor of Psychiatry, Medical Department, Leland Stanford Junior University, San Francisco. St. Louis: C. V. Mosby Company, 1919. Price, \$2.00.

This compendium of neuro-psyche examination methods makes a desirable addition to the literature of this field in medicine. It is prepared as a guide in making psychiatric-neurologic examinations for use of students and physicians in general and has been restricted to the more important points with little mention of theoretical problems. The subject is well handled and the different sections are well



worked together. The examination schedule is complete both from the psychic and somatic standpoint. As no two persons think alike, so no two physicians follow the same scheme of examination. For the beginner, however, some assistance and guidance is essential, and this little book fulfills such a necessity and should be found quite useful to those for whom it was prepared.

F. M. B.

**THE BLIND.** Their Condition and the Work Being Done for Them in the United States. By Harry Best, Ph.D. New York: The Macmillan Company.

This is the most comprehensive work on this subject which has yet appeared. Since compassion alone had never brought happiness to these unfortunates until it had been supplemented by the opportunity to work and develop character, the book has been with propriety dedicated "to those bearing the heaviest human sorrows but in whose souls there shineth an everlasting light and to those who labor for them with infinite courage and faithfulness."

The author successfully presents a "Social Survey" of the blind with full consideration of these unfortunates as components of the population of the state, emphasizing the fact that while blind children have been educated they have generally been allowed to shift for themselves after graduation without the supervision necessary to maintain successful citizenship. From the definition offered in this book, a blind person is "one who, even with the help of eye-glasses, or with other resources, has not sufficient ocular power for the ordinary affairs of life or in particular for the performance of tasks for which eyesight is essential." Best gives the returns of the 1910 Federal Census, showing that there were 57,272 blind persons in the United States, or 623 per million of population. He reviews their legal status in each state, their economic condition, popular conceptions regarding them, and the cost of blindness to the individual and the state.

In Part II he deals with causes of blindness and its prevention. Part III is devoted to the education of blind children in the various states while Part IV includes the intellectual provision for the adult blind through libraries and home teaching. In Part V he deals exhaustively with the material provision for the blind in homes and industrial establishments, pensions and indemnities as well as insurance. Part VI is devoted to the various organizations interested in the blind. Part VII is a most practical chapter presenting the author's conclusions with respect to the work for the blind in the United States.

This book should be in every public and medical library, and wherever it can be accessible to workers for the amelioration of the condition of the blind.

J. W. C.

**MEDICAL CLINICS OF NORTH AMERICA.** May, 1919. Index Number. Philadelphia: W. B. Saunders Company.

The May issue of this excellent publication is the "Baltimore Number" and presents clinical descriptions of the following cases:

Personal Experience in the Treatment of Ulcer of the Stomach, clinic of Dr. Julius Friedenwald, Mercy Hospital.

Various Types of Achylia Gastrica as Revealed by the Rehfuess Method of Fractional Analysis, clinic of Dr. Julius Friedenwald, Mercy Hospital.

Some of the Aspects of Epidemic Influenza in Children, clinic of Dr. John Ruhrah, University of Maryland.

Fundamentals in the Treatment of Pulmonary Tuberculosis, clinic of Dr. Gordon Wilson, University of Maryland.

From the clinics of the Johns Hopkins Hospital: Funicular Myelitis, or Combined Sclerosis of the Spinal Cord, clinic of Dr. Lewellys F. Barker.

Pneumococcus Sepsis, clinic of Dr. Paul W. Clough. The Clinical Diagnosis of Epidemic Influenza, clinic of Dr. Arthur L. Bloomfield.

Notes on the Gastric Signs and Symptoms in Diseases Other Than Those of the Stomach, clinic of Dr. Thomas R. Brown.

Gastro-Intestinal Disturbances in Metabolic Diseases and Diseases of the Ductless Glands, clinic of Dr. John H. King.

The Rôle of Diet in Treatment of Digestive Diseases, clinic of Dr. E. H. Gaither.

Esophagoscopy as an Aid in the Diagnosis and Treatment of Esophageal Disease, clinic of Dr. Elmer B. Freeman.

The Roentgenologic Signs of Joint Lesions in Children, clinic of Dr. Frederick H. Baetjer.

Introductory Remarks to a Discussion of Diabetes, clinic of Dr. Louis Hamman.

Serous Membrane Tuberculosis, clinic of Dr. Louis Hamman.

Auricular Fibrillation, clinic of Dr. Louis Hamman.

A Case of Multiple Tuberculosis in Childhood, clinic of Dr. Allen K. Krause.

**THYROID AND THYMUS.** By Andre Crotti, M.D., F. A. C.S., LL.D.; Formerly Professor of Clinical Surgery and Associate Professor of Anatomy at Ohio State University College of Medicine; Surgeon to Grant and Children's Hospitals, Columbus, Ohio, etc. With 96 illustrations and 33 plates in colors. Philadelphia and New York: Lea and Febiger. Price, \$10.

As one glances through the preface one notes with surprise that a surgeon has acknowledged indebtedness to a pathologist. He must have become fairly familiar in those parts for he speaks of Stilling as his master. So stimulated, one hastens to see whether the book can have any practical use and therefore he begins at the back and reads forward and finds first of all some 30 pages on postoperative complications. Here one finds all the unpleasant happenings he has experienced and a few he has perchance yet to meet. That is not over-reassuring to the reader but complimentary to the completeness of the book. Then one finds anesthesia, postoperative treatment, technic, and pre-operative treatment, each discussed in turn. Then one finds the indications and contra-indications discussed with completeness. Then comes the discussion of nonoperative treatment. Then comes the body of the work, the discussion of symptomatology. Numerous phrases not unfamiliar to most surgeons, such as cutaneous symptoms, blood changes, sensory changes and the like receive discussion. One of the best sections is that on intrathoracic goiter. As one approaches the beginning of the book one begins to wonder if the author really absorbed anything from the pathological laboratory, so practical is the work. In fact, his pathological training finds expression in less than 60 pages. This space is sufficient to show that his groundwork is broad and sure. The author's diction shows him to be of foreign birth but it does not affect the clearness of the meaning and one sees in it but the fact that the author is a man of unusual vision, for after selecting Stilling and Kocher as his teachers he has selected ours as his adopted land.

The book is easily the best practical work that has appeared and the surgeon who has not heard of it is to be pitied and he who knows of it and does not avail himself of the benefit of its contents is to be censured.

There is but one valid criticism to be offered. The author speaks of his obligation to writers of treatises in several languages. Yet the book has no bibliography! It is a calamity that the author does not give us a chance to follow his information to its source.

A. E. H.

# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

Volume XVI

CHICAGO, ILL., AND ST. LOUIS, MO., NOVEMBER, 1919

Number 11

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### ORIGINAL ARTICLES

#### WHY PRENATAL CARE?\*

C. A. RITTER, M.D.  
KANSAS CITY, MO.

Prenatal care may be defined as preventive medicine applied to obstetrics hence broadly considered and correctly administered, embraces and utilizes all possible measures in the way of protecting and keeping the prospective mother and unborn child well, whether represented by charity, industrial, well to do, or rich. It intensifies the benefits derived from early, thorough, and constant observation of both patients, enabling the earlier and better correction of dangers, antedating conception, ascertaining as to healthy or diseased body at the beginning of gestation, fortifying the maternal organism for the special function imposed in consequence of the growing fetus. Has for its function the interrogation of the woman's entire past and present physical and nervous make up; endeavoring to keep her free from attacks of intercurrent disease, correctly instructing her in the essentials necessary to comfort, health, and safety as mother and unborn are piloted along the dangerous journey between health and disease to the close of maternity. The attitude taken on the part of those deeply interested in all that enters into the safety of both mother, unborn, or newly born child, must reach its fullest benefits when rational, prenatal, and obstetrical care have been invoked from the earliest weeks of conception until the close of the puerperium.

Why these days of anxiety, months of care and watching? is often asked by the careless public and probably not a few disinterested members of the profession. In answering we are justified in stating, that while maternity is universally supposed to imply the exercising and executing of a physiologic function, the dis-

eased, ill prepared, the vicious, the morbid conditions embodied in the make up of modern life, as met in the presence of dynamic midwifery, have combined to make it far too frequently a pathologic certainty. Reasoning from analogy, in the absence of a normal father and mother we can not expect the birth of a healthy and perfectly developed child.

Obstetrics of today as taught and practiced in the fullest interest of all concerned constitutes more than the services of the medical attendant begun at the onset of labor and ended with delivery of the placenta. It considers the care of the mother and child from the onset of gestation to the close of the puerperium, including all helps for the betterment and safety of both, implies obedience to the laws of health, the general submission to the rules of personal hygiene, normal living, individual protection, prenatal supervision, safe obstetrics such as "every child bearing woman should possess" in the fullest degree in the interest of herself and child. Practical application has long since proven in dealing with the sick, abnormal, exposed, dangerous, that it is safer, easier, cheaper, and better to prevent than cure disease, to which the department of obstetrics furnishes no exception. All aids in the way of safety furnished mother and child before birth necessarily protects and makes for improvement of both, during and after birth.

It is very important to remember that motherhood in the entirety exacts the most severe test of woman's physical, mental, and nervous make up. It is also imperative to know that pregnancy fails to furnish immunity from any disease, augments all pre-existing maladies, renders woman more susceptible to many general disorders, complicates and endangers intercurrent diseases and intensifies all local affections.

Reasoning by comparison that from the birth of humanity all down the centuries there have been associated with the act of reproduction many dangers increased by the absence of antenatal care and safe midwifery; likewise multiplied by disease, mode of life, perverted habits,

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



and mechanical obstruction—these facts are none the less important when we realize for ages the meager and gross danger signals of maternity have flashed their red warning along the pathway of the prospective and parturient mother, the same through ignorance and failure of correct interpretation as to diagnostic and prognostic values remained largely unobserved by the medical attendant.

It may be asked with all seriousness why the apparent increasing dangers, the multiplied red lights flashing out their signals of warning along the pathway of the pregnant woman of the present, are increased over those of the past. Have the natural laws "governing reproduction" been perverted? Or the mechanism of labor and the puerperium changed? Are the women of today less capable of assuming the mental, physical, and nervous strain, necessary to the "requisites of perfect motherhood" than were their grandmothers? Has this often quoted "primitive physiological process," under the trend and vicious influence of modern civilization to a varied degree suffered defeat, thereby substituting a pathologic condition?

It is apparent to the close observer in the execution of present day obstetrics in delivering the legitimate offspring of the twentieth century that the penalty exacted in consequence of violation of health laws, demands of society, strain, stress, perverted habits of modern civilization, and artificial life coupled with a diseased body at the onset of gestation or acquired during its presence, frequently prove an "unbearable burden" resulting in broken maternal compensation, often followed by physical and nervous wreckage, giving to humanity a weak, undeveloped, poorly nourished child of uncertain potential value.

In view of the above unfavorable obstetrical findings the prospective mother in placing herself under protection of her attendant should receive from his hands as thorough a physical examination as if she were to pass for life insurance. The importance of "safety first" in correctly interrogating the woman's individual make up, including close inspection of nose, tonsils, and teeth for focal infection; estimating nervous, circulatory and urinary index; noting carefully the blood pressure; are the pelvic measurements normal? determining the existence of diseases pertaining to the thoracic, abdominal and reproductive organs; otherwise is pregnancy begun in the presence of a healthy body thus armed with positive or negative findings as to health or existing disease relative to general or special bodily functions and possessing the individual health chart the attendant is better prepared for executing antenatal and internatal supervision, the conduction of labor and care of mother and child during the puerperium.

The well known version of the village maiden expressed under the phrase "she feeds two" as referring to Marguerite in the rendering of "Faust" is virtually true as applied to the pregnant woman, for she is required to breathe, digest, assimilate, excrete and secrete for herself and growing fetus and so soon as these functions are interfered with they endanger life and health of mother and unborn child; the neglect or ill health of either jeopardizes the life of the other.

The profession has as a body so far failed to seriously consider the degree of danger and obstetrical disqualifications imposed on the present and potential mother in consequence of pre-existing and intercurrent diseases, perverted nervous organization, and "dwarfed physical make up," preferring to consider all pregnant women normal unless some flagrant danger signal announces in the superlative degree that she is otherwise. The safer and more rational procedure in securing protection for mother and unborn child would be to consider every pregnant woman obstetrically abnormal until she is proven normal by the most searching physical examination. Tradition is especially responsible in cloaking the midwifery art as a "mysterious something" thus largely removing it from the application of prenatal measures and safe obstetrical care. This erroneous traditional inheritance handed down as a vicious, maternal legacy is responsible for much neglect, suffering, invalidism and death as applied to the child-bearing woman and her offspring. We are within the bounds of truth in stating that as a result of the above belief, neglect, and ignorance, the globe has been belted with tombstones marking the last resting place of women who paid the supreme sacrifice at the altar of motherhood.

The ability to more fully comprehend past conditions, measure the extent of neglect, estimate the suffering, dangers, mortality, crippled mothers and children left as pensioners on society and burdens to family, may be in a faint degree realized when we are confronted by the statement that prior to the birth of the present century 60 per cent. of all labors in the United States were attended by ignorant and dirty midwives or physicians who had but little regard for surgical cleanliness, protection of patients, their present or future health.

Statistics inform us that during recent years the mortality in typhoid fever has been reduced from 46 to 17 per cent to every 100,000 population; diphtheria death rate dropped from 97 to 18 per cent; tuberculosis from 250 to 147 per cent.; pneumonia from 186 to 132 per cent. Such life saving comes not by chance but as the combined efforts furnished and exercised by all agencies of whatsoever nature calculated to prevent or cure. While obstetrics has assumed the dignity of a specialty, recognized as a unit

of general surgery and with the universal presence of maternity and a more definite understanding of its dangers, the general practitioner is doing better and safer work today than ever before and will continue as in the past to attend the major part of all labors. Yet with the present betterment no marked reduction as to morbidity and mortality has recently come to the child-bearing woman and offspring from accidents, diseases, and special pathological dangers associated with the act of motherhood. The tragedies met in all round obstetrical work call for the exercising of every possible safeguard in the way of eliminating or diminishing the dangers incident to the accomplishment of maternity. The practical safety standard can not be secured until the masses are educated to the dangers of pregnancy, saving prenatal and antenatal supervision be secured and intensified obstetrical services rendered. Toward this end we note the established antenatal organizations are more generally pooling their combined support and coordinating their various activities in the interest of the child-bearing woman and her offspring. That every available factor for their safety be speedily and faithfully enlisted would seem imperative when we are confronted with the humiliating statement that governmental records compiled from among sixteen enlightened nations list the United States as fourteenth in mortality due to child-birth and its complications. As computed for 100,000 population the maximum death rate goes to Spain showing a mortality of 19.6; the second highest to America, 14.9; while Sweden drops to the lowest, 6. In the United States at present we are led to believe the practice of midwifery is relatively in the hands of the regular profession; such is not true so generally in the countries of Europe which are included in the above nations; hence we must to a large degree assume the blame for poor obstetrics.

The ignorance on the part of womanhood regarding dangers and necessity for adequate preparation for maternity, the apathy of the general public pertaining to the health and life of child-bearing woman and her offspring; the degree of neglect and failure on the part of the profession to measure the hazard accompanying maternity, have combined to render full saving prenatal benefits, until the very recent past, conspicuous by their absence. In our safety and antenatal measures in behalf of motherhood we are not alone administering to a local, special, geographical, or single danger zone; pregnancy and its end-results are cosmopolitan in extent. The child-bearing woman is found in the hovel where filth, disease, ignorance, and crime hold perpetual carnival; ever present in country, hamlet, village, town or city cottage; universally found in the home of the well to do where happiness and comfort

dwell; met generally by accident in the palace of the rich surrounded by wealth, luxury, and ease.

The difficulty in securing the helpful benefits of antenatal care in absence of cooperative efforts in behalf of the local profession, and the unwillingness to accept and in a saving degree obey the hygienic rules governing pregnancy by the laity, is painfully realized by the busy city or country practitioner with maternity work scattered from center to periphery of territory, often summoned to the promiscuous lying-in room without previous knowledge of patient or existent pregnancy.

Much can be accomplished in the way of assisting the profession and educating the public by free distribution of booklets on prenatal care and infant mortality and kindred subjects; issued under the supervision of the United States Department of Labor and Children's Bureau; aided through the cooperation of local boards of health in securing standardized literature bearing on maternity, furnished prospective mothers through distribution to physicians by secretaries of county societies; well censored notes carried under health columns in local papers; as to necessity of early registration of every pregnant woman with physician of her choice, thus without personal publicity she is enabled to secure antepartum supervision.

The prospective mother should be informed as to the absolute necessity of insuring safety to herself and the unborn child by frequently presenting herself for personal health inventory, receiving instruction as to diet in keeping with individual case; kind and degree of exercise; and character of clothing. The importance of fifteen day reading of blood pressure, checking of renal output as to amount, chemical and microscopic findings, normal and abnormal constituents should be emphasized. These frequent antepartum observations should furnish occasion for noting patient's physical index, included under early or late gestational pathology as manifest in presence of undue vomiting, bilateral headache, increased arterial tension; ocular manifestations, gastric disturbances, perverted nervous phenomena, edema, general diminished excretions and secretions; such gestational pathology if present in the mildest degree stands chargeable with an assault on maternal and fetal life, presenting a clinical picture of antenatal symptomatology shot through and through with danger signals of sufficient magnitude to enable the most casual observer to read. In so doing systematically, apply prophylactic, therapeutic, obstetrical and surgical measures in interest of mother and unborn child.

Is there no necessity for maternal preparedness or demands for safe obstetrics when we are



confronted with the conservative estimate that approximately 85 per cent. of the child-bearing women in America are accorded no saving degree of antepartum care, while great numbers are attended by ignorant and dirty midwives or members of the profession ill qualified to render safe service in consequence of inadequate facilities, lack of assistance, personal obstetrical experience or definite surgical technic.

Practical experience of those engaged in obstetrics as a specialty demonstrates that approximately 30 per cent. of all pregnancies are in some degree abnormal. This danger is manifest by the slightest degree of ill health or represented by the most vicious gestational or internatal pathology. In the presence of these dangers the safest way to protect all is to furnish rational, prenatal care to every case or uterogestation. This would seem highly necessary when 4 per cent. of all gestations present symptoms of definite toxic or preeclamptic danger signals; 2 per cent. of expected mothers show heart lesions; 9 per cent. of all prospective mothers possess some degree of pelvic contraction; 3 to 5 per cent. are affected with syphilis; 6 per cent. carry abnormal blood pressure; antepartum hemorrhage present in 1 per cent.; 0.7 of 1 per cent. show evidences of tuberculosis. While 7 per cent. of all deaths of women between the ages of 18 and 40 are caused from puerperal infection which, with our present knowledge as to the cause, is very largely preventable.

In the campaign inaugurated in behalf of "baby week" full recognition has not been accorded the fact that in the great battle for betterment the "mother is baby's first and best friend," failing to realize that health, education, protection, antenatal supervision and highest grades of obstetrical service rendered child-bearing woman and unborn offspring cannot be logically and safely separated from infant mortality and its prevention in making for better mothers and "healthier babies."

It is hard to understand in the face of the above diseases, dangers and loss of life how the most conservative, physiologic standpatter can fail to realize that there is necessity for antepartum care and legitimate obstetrical service, as practical experience demonstrates there is something radically out of the normal in not a few of the present day type of women when subjected to the sacrificial strain rendered necessary for maternity.

The question may be asked by the "doubting Thomas" or the Missouri doctors who "must be shown" as to the prospective mother's willingness to receive supervision along the various lines implied under prenatal care when approached on the grounds of personal safety as applied to self and unborn child. The uniform answer as coming from those who have

individually advocated or personally employed the measures, whether on the part of the visiting nurse, special social worker, health boards, prenatal clinics, medical attendant, or obstetrical specialist, is very largely in the affirmative. The willingness to generally accept and largely obey the measures of safety offered makes it incumbent on the part of the profession in the fullest degree that these safeguards be furnished, not in the spirit of an alarmist or from the standpoint of the medical demagogue, but as a personal duty exacted of the profession in touching all candidates for motherhood.

There is probably no division of medicine or surgery in which men who have had little or no special training feel so competent to act as in obstetrics. It may be safely stated there is no department of the healing art in which an incompetent attendant is capable of doing so much harm.

Generally speaking the profession has failed to recognize that the highest service rendered by the obstetrician is to ever keep in mind and put in practice the first great principle, "the primary purpose of conception is reproduction." In this full prenatal supervision intensive obstetrical service fulfills its broadest mission, reaches its fullest success in the successful delivery of a living healthy child from the unutilized and otherwise sound mother, remembering it is not how soon but how well the individual labor is terminated.

Professionally we most respectfully bow to the general practitioners in country or otherwise, who in consequence of lack of antepartum supervision and in absence of competent assistance is often compelled in the presence of grave emergencies to assume the responsibilities of attendant, consultant, operator, and nurse. As personally met in promiscuous lying-in room in city, town, or country we have found in the presence of most vicious forms of gestational pathology or various degrees of dystocia in dynamic obstetrics, their diagnosis to be very largely correct. The end results of their work in estimating factors at fault and the best lines of procedure in the interest of both patients bespeak for them the executing of sound judgment and obstetrical skill in his life saving measures.

Today the battle cry of the profession is prevention of disease. In practical application of the same to child-bearing woman, the obstetrician should more and more direct his efforts along lines of protective measures included under general hygiene of pregnancy as applied to diet, normal functions of various bodily excretories, maternal and fetal metabolism, broad prophylactic measures, associated with complete antepartum supervision and skilled obstetrical service.

In our endeavors to standardize procedures to furnish the best and safest protection for maternity there should be the closest articulation of action between service of the obstetrician and midwifery on the part of the general practitioner along the lines of safeguarding mother and child in the direction of securing uniform methods bearing on the application of prophylactic benefits, therapeutic measures, prenatal care, surgical technic and obstetrical skill. Members of profession direct from dynamic obstetrical firing line in relating personal experience pertaining to care of pregnancy and delivery of logical offspring of present day, will doubtless verify the fact that there is an increasing gestational pathology, a more frequent call for art in supplementing inefficient forces of nature in her efforts to accomplish normal delivery. It goes without saying that such artificial assistance to best serve the safety of all must carry with it due consideration as to the individual factors involved, the personal equation to be solved, the safest measures to be adopted in the interest of health and life in terminating delivery. The necessity of conservation of mother and child life is forcibly apparent when we are confronted with the death rate as computed from the annual number of utero-gestations in the United States which trustworthy sources approximate to be 2,650,000. From this number no satisfactory measures have been instituted whereby the enormous loss of fetal life may be computed in consequence of expulsion of the products of conception before viability. Out of the above number 15,000 maternal lives are annually lost and additional thousands left with impaired health due to pregnancy accompanying accidents and complications. One hundred and fifty thousand mothers give birth to full term dead babies, while during the first four weeks of infant life another 115,000 die, showing the annual number of lives lost to be 280,000 in the execution of what is regarded the normal and supreme function in the life of the child-bearing woman, a loss only second to that of tuberculosis. Facing the above facts is it necessary to ask, are we dealing with a function peculiar to motherhood theoretically and practically free from danger? It would seem so from the frequent indifference evinced by those who should be most vitally interested. A conservative estimate as to saving of maternal and infant life under adequate full term antenatal supervision coupled with all possible obstetrical service and surgical skill during labor and puerperium shows from practical application the reduction in the above nation-wide death roll as applied to maternal and infant mortality a decline of at least 30 to 50 per cent.

The increasing number of prenatal clinics, charity organizations, antenatal nursing, better-

ment of rural obstetrics, enlistment and hearty cooperation of local and state boards of health and United States Department of Labor and the Children's Bureau furnish active evidence as to growing and more general efforts in reduction and waste of maternal and child life. As practical evidences of the above the Boston Prenatal Clinic during five years' supervision of antenatal care guided 1,512 mothers to onset of labor without a maternal death. The graver forms of pathology were largely prevented or more effectively arrested. Sixty eclamptic manifestations during first year were reduced under complete prenatal supervision and accorded obstetrical service until only five developed during the last year with one postpartum death. Still-borns dropped to one half that of the city at large; premature births lowered to 1 per cent.; infant mortality for first month reduced 50 per cent. below that of the Boston health report. The exhaustive report of the New York Milk Commission testifies to the life saving results derived from close antenatal supervision coupled with skilled midwifery as furnished in a series of 3,000 births, maternal mortality and morbidity being reduced 69 per cent.; 22 per cent. reduction in still-borns, 28 per cent. decrease of infant life during first month.

Louis I. Dublin, obstetrical statistician for Metropolitan Life Insurance Company, estimates the value to that public corporation of antenatal inter and postnatal supervision as applied largely to the industrial class of female policy holders of child bearing age. The report covers a period of six years. Forty thousand pregnant and parturient women were annually accorded prenatal and maternity service, showing mortality from conditions and accidents incident to childbirth, of 10,056 mothers between ages of 14 and 45. These deaths when related to totals under observation during six years represent a death rate of 68.4 per 100,000 policy holders. Septicemia was responsible for 42 per cent.; toxemia and eclampsia for 26 per cent.; the two conditions chargeable for 69 per cent. of total deaths. Under the above general supervision the death rate due to childbirth in its entirety gives a reduction of 10.7 per cent., with 17 per cent. fall of mortality from toxemia and puerperal infection representing the value of antenatal and internatal supervision as life protecting measure in the saving of over 1,000 lives.

There have been attended in the maternity department of the Christian Church Hospital, Kansas City, during the past three years, 750 labors. Toxicity in milder or graver forms was present in 7 per cent. of these cases, while almost every form of pathology, graver emergencies and accidents found in the entire domain of obstetrics were encountered including twenty-one cesarean sections. Under full period



prenatal supervision by the obstetrical staff the conduction of labor under strictly aseptic technic, every woman in labor is regarded as a surgical patient and accorded all the protection of a major operation, limiting and determining the presence and progress of labor invariably by rectal examination thereby diminishing dangers of infection, the safety of child being determined by frequent and intelligent auscultation as to location, frequency, and character of heart tones. A drop of fetal pulse to 110 or a sudden rise to 170 was regarded as a danger signal calling for the consideration of artificial assistance in completing delivery in the interest and safety of child. In the presence of full ante-, inter-, and postnatal supervision, in behalf of the attending obstetricians, the analysis of three years' work furnishes the following results: premature births 1.4 per cent.; full term still-borns 3.6 per cent.; infant mortality under one month 1.3 per cent.; maternal mortality 0.26 of 1 per cent., showing a lowering of still-borns over the city's annual health report of 40 per cent. and maternal mortality reduction of 65 per cent.

In the increasing recognition of full period prenatal protection there has come a more frequent demand for an additional and indispensable element of safety in presence of hospital trained or graduate nurse. In the consideration of personal safety the value of antepartum diagnosis, the measures in detecting dangers, anticipating accidents and emergencies during pregnancy and labor, general safeguarding furnished mother and child, have produced a revolution on the part of expected mothers as to frequency in availing themselves of hospital accommodations, intensive obstetrical service in behalf of self, unborn, and the newly-born child. Many not serving in the first line trenches of dynamic obstetrics may question the necessity of universal preparedness for motherhood, doubt the dangers, accidents and pathologic findings met in all round midwifery. Practical experience proves the red letter side of the obstetrical ledger is increased or diminished in ratio to the absence or presence of adequate safeguards extended during gestation and the degree of obstetrical skill and surgical measures employed during labor and puerperium. The value of antepartum care is offered not under the guise of the alarmist or meddlesome interference in the presence of absolutely normal gestation, but assumes the role of "safety first" as applied to all round preparation on the part of mother and the unborn child as furnishing the greatest security in the end results of maternity. Prenatal care in its fullest scope seeks to educate the public, and the child-bearing woman in particular, as to the necessity of general preparedness for motherhood; concedes that gesta-

tion as met in many of present day women is not a complete physiologic process; recognizes value of full hygienic measures, importance of beginning gestation in presence of healthy body, necessity of thorough, physical examination, and the dangers of preexisting or intercurrent diseases; endeavors through prenatal propaganda and antenatal clinics to educate the public and remind the profession as to dangers of maternity when fully executed takes mother through entire period of gestation; prepares her to better resist accidents and emergencies during labor and puerperium; furnishes antepartum knowledge as to existing toxemias; reduces dangers and accidents in dynamic midwifery; endeavors to raise standard of obstetrics; develops better maternity nursing; lessens number of premature labors 40 per cent.; diminishes still-borns one half; decreases infant mortality for first month 25 per cent.; lowers maternal deaths 30 to 60 per cent.; renders elective procedures more frequent and obstetrical surgery more successful as a life saving agent.

The obstetrical profession, realizing in consequence of the lack of antenatal protection and unsafe midwifery, that there have been and are entirely too many crippled mothers and unhealthy children coming back from the obstetrical battle front, with this knowledge and in full recognition as to dangers of life and health to child-bearing women and unborn child, would most respectfully urge in their interest the hearty cooperation of the medical fraternity as a whole, in that they impress on their female clientele of child-bearing age the advantage and safety accruing from placing themselves under a competent medical adviser early in gestation, thereby promoting a more general recognition of prenatal, inter- and postnatal supervision in computing the full benefits from onset of conception until close of puerperium. In the presence of full practical execution of prenatal, inter- and postnatal care, coordinated with surgical technic and obstetrical skill, the department of midwifery will come largely into its own, giving to the sum total of healing art an additional unit of protection, power, and life saving measures for the betterment of maternity in its entirety. Whether this safety be secured or assistance rendered in protecting health and saving life along the narrow margin which separates the prospective mother from disease, or executed with skill and saving judgment amid the storm centers of pathologic obstetrics.

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- Metropolitan Life Statistics.

## DISCUSSION

DR. D. R. PARMAN, St. Louis: If the child within the abdomen is dependent on the mother for its materials of growth, then it is reasonable to suppose that a healthy mother will produce a more healthy child. So in carrying out our prenatal care, keeping the mother in the best possible health, we produce the healthiest possible child. I agree with the doctor that a thorough physical examination should be made and made early, not only an obstetrical examination but a physical examination to determine the condition of the patient in general. Of course a thorough examination of the pelvis should be made because there are abnormalities of the pelvis and these conditions should be found as early as possible. In that way we are often able to elect a procedure that will materially lessen the loss of life in the case of the mother as well as the infant. There have been established in probably more than 2,600 cities of the United States prenatal clinics with visiting nurses. The statistics from the Visiting Nurses Association in Boston have shown that the death rate has been reduced from 4 per cent. to 2 per cent. We have a report of similar statistics from New York. In Paris in 1915 there were something over 16,000 births with 74 per cent. delivered in hospitals, and the mothers were also furnished nurses that would visit them and give instructions as to the care of themselves, hygiene and general health, that would be of benefit; and by conducting these prenatal clinics the mortality of the mother was reduced 20 per cent. and that of the children 30 per cent., notwithstanding the strain and unusual conditions brought about by the war. Williams says that prenatal care will reduce the infant mortality by 40 per cent. He has also estimated that about 80,000 mothers lose their lives annually in this country due to conditions incident to childbirth and labor. That being the case, if we can reduce this mortality by half it certainly is worth while to carry on this work of education throughout the country. Therefore I think we should have a very definite mode of procedure and instructions to carry out with our pregnant women, and in so doing we not only decrease the mortality but will make better obstetricians.

DR. GEORGE CLARK MOSHER, Kansas City: Coming down on the train this morning I was sitting in the seat with three members of the Association and the talk turned to obstetrics. One of them said, "The trouble in country practice is that no opportunity is given for prenatal care from the fact that a great majority of patients never present themselves for examination until labor is imminent." Now prenatal care, it must be confessed if it is ideally carried out, must be in connection with either a hospital or prenatal clinic. Perhaps less than 30 per cent. of the women who are confined, even in the cities, have the advantage of hospital care. Therefore, to get to the general public the advantages of what Dr. Ritter and Dr. Whitridge Williams and other men who have studied the benefits of this system have discovered, some method of education must be followed to interest the patient. For instance, it ought to be easy to educate women to come to the prospective medical attendant at least once a month for examination of urine, blood pressure, etc. Of course every woman who has not had the test of labor is entitled to have and should be given pelvic measurements. These routine examinations give each patient a chance to have discovered any abnormal thyroid condition, anything wrong with teeth, heart, or kidneys, syphilis, if it is suspected, etc. The Children's Bureau of the Department of Labor has planned a very simple routine of prenatal examination and care: (1) General physical examination; (2) measurements; (3) continued supervision during last five months, and

(4) examination of urine, blood pressure, etc. The Maternity Service Association of New York has adopted this plan with the addition that a Wassermann is made in every suspicious case.

When we scan the statistics we see that the mortality of childbirth has not been appreciably reduced in the last twenty years, and when 5,000 mothers lose their lives annually, 150,000 stillborn infants are lost at term and 115,000 die within the first four weeks, we can very readily see the necessity for prenatal care. Many women are wrecks and invalids who do not lose their lives. Tuberculosis only claims a larger mortality of women during their child-bearing period than the incidents growing out of maternity. It is said that this enormous loss of life due to the lack of proper care of mothers previous to and during their labor can be reduced 30 to 50 per cent. What an argument for prenatal care! It seems to me that Dr. Ritter's appeal is not only timely, but it should bring about great good in the field in which he has so long and so successfully labored.

DR. B. G. HAMILTON, Kansas City: We younger men derive a great benefit from the example set by Dr. Ritter. It is a well known fact that both he and Dr. Mosher have been pioneers in emphasizing the necessity of prenatal care and clean and efficient obstetrics. Dr. Ritter's paper is all the more convincing because he was for years a teacher in the University Medical College and he has both by precept and example taught the principles he has so ably expounded. The importance of prenatal care can not be too much emphasized at this time when the conservation of life is such an all-absorbing topic; for results show that the safety of the mother and babe at the time of birth and the future health of the mother depend almost entirely on the care that the mother receives during pregnancy.

It is of vast importance that the prospective mother report early for a thorough physical examination and instruction in such matters as clothing, diet, toxemias, etc. The examination enables the attending physician to visualize each patient as an individual. With the physical examination a complete history of each patient should be taken, since it is well known that many of the diseases of childhood produce in the mother such defects as nephritis, heart lesions, and deformed pelvis, all of which may be recognized by taking a complete history of the patient, making a thorough physical examination, and taking careful measurements of both the inlet and the outlet of the pelvis.

In the Woman's Municipal League of Boston 5,000 cases were under observation in five years. In the first year there were sixty cases of eclampsia, in the next four years, when the patients were better educated as to the necessity of prenatal care, there were only four such cases, no miscarriages and only six premature labors; and only 87 per cent. of the mothers nursed their babes. So much can be accomplished by proper prenatal care.

The patient should report at regular intervals of not less than one month to have the urine analyzed, the blood pressure taken and inquiry made regarding her general health. She should learn early to receive instructions from her physician rather than the all too frequent harmful instructions from well meaning but ill informed friends. She should note down from time to time questions of interest to her and she should consult freely with her physician regarding these questions, that her fears may be allayed in unimportant matters and that any alarming symptoms may receive prompt and intelligent attention. It would be difficult to estimate the number of fatal consequences that follow the mistaken idea that pregnancy necessarily brings with it an array of discomforts that are to be ignored; whereas such symptoms are fre-



quently danger signals to warn us of conditions that demand prompt attention.

An early examination followed by regular consultations wins the confidence of the patient and gives the physician a chance to become acquainted with her physical make up and her power of endurance, both of which are of vast importance at the time of labor. All this may sound visionary to those who have not done these things, but I assure you from personal experience, that they can be done, that they are absolutely necessary, and that they are followed by results that prove them so.

DR. RITTER, closing: The statements that today's trend of civilization, education, and modes of life are not conducive to greatest degree of health and safety of present and potential motherhood and offspring, is verified by the close observer in daily experience in antenatal supervision and obstetrical work. Fifteen years' service by the writer as attending obstetrician to Kansas City General Hospital proves the fact that under up to date obstetrical service the industrial class of women pass through gestation and require less artificial assistance during labor followed by fewer complications and diminished nervous wreckage than do women of a higher class, and a greater percentage of mothers in a normal degree nurse their babies than are found among well to do, college graduates, or the rich. May we not predict, from increasing recognition of the benefits, the more extended care given pregnant woman, the birth of a new era in safer obstetrics? Were it possible to secure uniform efforts of the 3,300 members of this association in a personal missionary campaign in the way of securing adequate prenatal supervision for every pregnant and parturient woman in the state of Missouri, the department of obstetrics in making its report to this body one year hence would not have to apologize, in consequence of neglect, maternal unpreparedness and failure in the execution of safe midwifery, for the unnecessary loss of maternal and child life.

#### DIAGNOSTICS OF DISEASE IN INFANCY\*

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In order that one may approach this subject with a fair degree of intelligence it is first necessary that he have some idea of what the term infancy designates. As a rule pediatricians are in the habit of regarding the first two years of life as the years of infancy but there is no sharp dividing point at this time as is evident to everyone, but in order that we may have some definite period which may be characterized by the term we usually speak of the first two years as the years of infancy. These years constitute the period of extrauterine life during which growth is most rapid, development most evident, and the change of the organism most marked. This period carries with it certain tendencies from intrauterine life and begins those characteristics which by the changes of childhood lead to the characteristics of adult existence. It is the most important period of

change during the extrauterine existence. It is that period when morbidity is greatest and mortality highest. From the standpoint of the progress of the continuance of the human race, it is therefore the most important period of life.

Not only are the above points true but it is also true that in many instances the physical and often the mental future of the individual is determined at this time. The importance therefore of this period cannot be exaggerated. It is strangely true that the medical profession has never regarded diagnosis at this age as of primary importance. While there is no question about the attitude of the profession as to the importance of diagnosis in the adult, in infancy the predominating place which has been given to infant feeding has, to the bulk of the profession, given the idea that diagnosis is not of the same importance here as elsewhere. We therefore have that anomalous condition of therapy without diagnosis in many instances. May I say here that no intelligent therapy is possible without proper diagnosis and the reason for the failure in most instances is not so much the lack of knowledge of therapy and definite indications but rather a lack of diagnostic ability. This is especially true in the so-called feeding cases where the average physician's golden rule is, "if this does not do try something else."

Again, at this period the physician is too much inclined to label a symptom as if it were a disease. Such diagnoses as diarrhea, convulsions, and vomiting are no diagnoses; they are simply names of one symptom complex whose nature has not been recognized. But while all these conditions are true, there is still another whose roots are planted deeper and whose errors will be much harder to eradicate, and that is, the idea that one can learn the diagnosis of infancy by learning diagnosis in adult life. If there is one reason more than another for the existence of the specialty of pediatrics, it is that diagnosis in infancy is based on principles and facts which vary materially from those which hold good in adult life. While of course the general scheme of physiology must be much the same in the infant as in the adult, the interpretation of the symptoms rests on a knowledge not only of the physiology and pathological physiology of adult life, but also on the physiology peculiar to infancy which is represented by the continued process of growth by which this period of life is characterized.

Diseases at this time frequently takes a much more rapid course, and the characteristics may be entirely different from those which the same cause will bring out in the adult. We must therefore in diagnosing a disease in infancy, have a knowledge of the infant as well as a knowledge of the disease. We must also have a knowledge of how the disease in question re-

\* Read before the Jackson County Medical Society, May 20, 1919.

acts on the infant and we must never take it for granted that because it acts in a certain way in the adult it will react in that way on the infant.

In order that one may arrive at a diagnosis one must necessarily have some scheme of elimination. While perhaps the diagnosis in the majority of cases which come to your hand is evident at first glance, still it is necessary in a very large proportion of cases to arrive at some system of elimination in order that we may get down to the basal disturbances.

Nutritional disturbances have rightly been given in infancy the position of prime importance. Slight disturbances of digestion and metabolism during this period of life often present grave problems for treatment, and not only this, but very slight changes in the diet may produce profound disturbances in the economy of the infant. Because of the predomination of this class of cases it would seem well to divide our babies into two groups—those having nutritional disturbances, and those having parenteral disease. If we do this we have a very definite scheme on which to work and we find that we can frequently in a very short time eliminate one or the other of these groups. Suffice it to say before we go further, that in nutritional disturbances the general disturbance is commensurate to the severity of the gastro-intestinal symptoms, while in parenteral disease the general disturbance is usually out of all proportion to the gastro-intestinal manifestations. In passing, one might state that while conditions in infancy usually are simple in nature, still multiple diagnoses are often necessary.

In all diagnoses we must take into consideration two groups of facts: (1) Those obtained by questioning attendants of the infant, and (2) those obtained by physical examination. In the vast majority of cases the second group is of far greater importance than the first. While I do not wish to belittle the attempt to accumulate knowledge of conditions by close questioning of the parents and attendants of the infant, I do wish to lay special stress on the fact that no diagnosis of the infant can be made unless the child is undressed and carefully examined. A small gland here or a rôle there may reveal disease which would have gone absolutely unnoticed had no proper examination been made. Nor is there any excuse for dispensing with this necessity because certainly the examination of a small infant requires less time than examination of the adult, nor is there the same objection to the undressing process. There are many points in the diagnosis of disease in infancy which impress one if he has had to deal with a great many infants. First is the general impression which the physician gets on first approach. After all our scientific schemes of

determining the state of advancement of the mental processes of the average infant, he will come back to his original impression to determine just how far that child will go mentally, just how great the degree of mental deficiency may be, whether or not that child has a stable or an unstable nervous system, whether or not the symptoms from which that infant is suffering are exaggerated by the underlying psychical state. That first fleeting impression is one which is of untold value to you and to your patient and one which it is impossible to put in words.

In examination it is very seldom wise, as in the adult, to start at the top of the head and go to the soles of the feet because we cannot control the emotions of our infants as we can in adult life, and we therefore must approach our subject in a more tactful way. Examination of the head and neck is usually done without very greatly disturbing the infant, but to examine the pharynx and mouth at this time is a mistake. Examination of the pharynx should be left until practically the last thing; nor should the chest examination be carried out at this time because it is much more likely to disturb the infant and make a careful abdominal examination impossible. But following the examination of the head and neck one should examine the abdomen and extremities. After these have been examined, examination of the chest should be made. It is frequently of advantage rather than otherwise for the child to cry at this time because it is the only way in which one can get deep respirations. A severe hard cry with deep respiration, so-called holding of the breath, is often of advantage in examining the heart, otherwise one is likely to mistake the sounds of respiration for a murmur, or mistake a cardiopulmonary murmur for a murmur of the heart itself. After the chest examination has been made one will take up then the examination of the pharynx and mouth, and finally the temperature.

Now, in this general system of examination there are certain points which must be insisted on. First, while in an infant examination of all parts of the body should be carefully made, one should understand that the lungs and heart do not bear the same important relation in diseases of infancy as in diseases of adult life. While congenital conditions in the heart are frequently found, still their importance cannot be compared with the heart lesions as found in adult life. Although affections of the lungs frequently do constitute a relatively high proportion of diseases in infancy, the variability of the disease is not so great though the transciency of findings is a thing which is frequently puzzling.

On the other hand, a careful examination of the abdomen will frequently bring out findings



which give us an entirely different idea of the disease picture before us. It should be remembered that enlargement of the spleen is much more frequent in infants than in adults, or even in children; enlargement of the liver, as a rule, does not have the same significance here as in later life. We should be very careful in our examination of the lymph glands, especially of the epitrochlear and intercostal glands. We should look carefully to the shape of the skull and any irregularity which may be present there. We should examine into the muscular activities of the child, carefully feeling the muscles, the state of nutrition, increased or lowered tonicities, all of which things are very necessary and a minute inspection may tell you many times more than the closest examination of the mother.

It is, of course, impossible in a treatise of this kind to take up in detail questions of diagnosis and differential diagnosis, but we can at least take into consideration certain prominent symptoms and discuss their significance.

First, *temperature*. The question of temperature is a question of the relation between heat production and heat elimination. If, for any reason, the relation between these two activities changes, then there is a disturbance of the normal body temperature. It is a noticeable fact that in premature infants this relationship is frequently disturbed, oftentimes in a rather bizarre manner. For instance, the premature baby is placed in an incubator whose temperature rises and with it rises the temperature of the baby so when taken the temperature may register 103 or 105 degrees F. This is absolutely contrary to our expectations because we have looked for a subnormal temperature in that same baby. Then the premature baby develops an infectious process, which in adults and older children produces a rise in temperature but in a fair proportion of these cases a subnormal temperature will be found. Why this should be is very hard to explain. But leaving out of the question the variation of temperature in the premature infant, let us look to a few of the characteristics of temperature changes in the full term infant suffering from some disease.

In the first place, it is rarely wise to draw any conclusions regarding temperature from one or two registrations. One must, in other words, have a more or less definite temperature curve from which to arrive at his conclusions. There is at least one condition in infancy where the temperature is characteristically subnormal and that is in those severe nutritional disturbances known as marasmus or decomposition. In these infants the temperature when taken at four-hour intervals will quite regularly show an average varying from 1.5 to 1 degree F. below normal and as the temperature tends to

come back to normal the general condition of the child improves. But I hear some one ask, what is the normal temperature of a baby? I think it can be very definitely stated that a temperature between 98 and 98.8 degrees F., taken rectally, may be regarded as normal temperature in infants. A slight variation above and below this at times occurs without indicating anything especially abnormal, but certainly these cases are the exception and not the rule. A temperature varying between 99 and 100 degrees F. is oftentimes of great significance in infants if it is continued over some period of time. A low type of fever is to be encountered in cases of dyspepsia and is of some diagnostic value. But, on the other hand, a rise of fever in an infant to 103, 4 or 5 degrees does not have the same significance as it does in an adult. Such rises of temperature can occur from comparatively slight causes. For instance, every once in a while in observing the newborn infant on the second or third day, one finds the temperature risen to 103 degrees F. There is no sign of infection; there is no sign of any great disturbance of the general condition. If we look at the table showing the amount of food the child is getting; if we look at the weight of the child and see that it has lost a lot of weight, then if we order a small amount of food for the child we are struck with the fact that the temperature comes down to normal and remains so. Nor does high temperature necessarily mean infection. It is a very common experience to find high temperature in those cases of convulsions with no infectious process whatever, the so-called spasmophilic convulsions. In this condition the fever must be caused by a great production of heat without adequate elimination.

I once saw a baby in consultation which had been having convulsions continuously for eight hours. The doctor in attendance had placed this child in a tub of hot water, kept it there and rubbed it. I asked that the child be taken out and put to bed and I was quite shocked to find the temperature registered 109 degrees F. I then took the temperature with two other thermometers and it was practically the same. By sponging and keeping the child quiet in two hours we were able to reduce the temperature to 103 degrees F., although there were convulsive seizures occasionally during this time. However, in the vast majority of cases in infants high fever means infection. The type of high fever is of a great deal of significance; it may be remittent, or intermittent, or continuous, and one must place each case in its own group.

Nor is an occasional temperature to be disregarded. I have oftentimes had babies in the ward who had been there for some weeks because of chronic nutritional disturbance, who

suddenly, out of a clear sky, shot up a temperature of 103 or 104 degrees F., the temperature disappearing within twenty-four hours. Almost invariably in these cases, if the urine is obtained at the time the temperature is the highest a large quantity of pus will be found. This has been so frequent that routine weekly examinations of the urine are made, even in those cases where we suspect no infection of the urinary tract.

How about teething as a cause of fever? To me it has always seemed that a physician who informs his patient that a given temperature is due to teething is simply fabricating a coat to cover his own ignorance. I would not say that I have been able to determine the cause of fever in all the cases which I have seen nor will I say that I have been able to determine the cause of fever in all those cases which might have been actively teething, but I will say that the proportion of the latter is no greater than the proportion of the former and that certainly our ignorance in regard to the cause of rise of temperature in certain cases cannot be wiped away by the assertion that in such a large number of cases teething is the cause. Certainly there is no physiological reason for regarding the perfectly normal process of teething as a cause for a rise in temperature and I would much prefer to state in a given case that I did not know the cause than attempt to assign teething as the cause.

Let us now consider the question of *weight*. We must remember that increase of weight in a given case may be the result of various factors. It may simply be a storing up of water in the system which may be caused by the absorption of rather large quantities of mineral salts or of sugar, or it may represent formation of body tissue after some wasting disease. We therefore cannot say that a falling weight or a rising weight is or is not of importance in every case. We must individualize the case and try to determine with the aid of other symptoms what the significance of that fall or rise of weight is. It may be that a rather rapid loss of weight is of importance to the child because it represents a rapid loss of water from edema. It may be that that rapid loss of weight represents a rapidly progressing diarrheal condition which seriously jeopardizes life. A stationary weight may represent a period of repair through which many nutritional disturbances must pass before the cure can be made. Or it may represent that period which is only the warning of a catastrophe to follow. Nor does the rise in weight always carry with it the roseate prospects which the young mother attributes to it. It oftentimes would be of far greater importance for the infant if it kept at a stationary weight for some days before it started to gain.

The reaction of the organism as regards weight is a clinical sign and taken with other phenomena may be of the greatest importance in determining not only the underlying conditions but also the individual factors in the case.

The *pulse* at this age responds with a change of 10 to 30 beats to the slightest stimulus; fright, crying, exertion and play all show this reaction. In order then that one may get a definite idea of the pulse rate in infants, the pulse should always be counted when the child is quiet or asleep. It is only at such times that we can get any comparative figures which will be of value to us clinically. While the rapidity of the pulse is of little clinical value, the slow pulse, frequently between 60 and 70 and at times 40, is quite often found in cases of decomposition or severe marasmus.

Respiratory action in infants differs materially from that of the adult. In the newborn infant *respiration* is always abdominal. There is no action of the accessory muscles of respiration due to the fact that the ribs at this age are almost at right angles with the spine, making it impossible for the sternum to be raised. As the infant grows older the accessory muscles of respiration come into play more and there is added to the diaphragmatic action a certain amount of thoracic. Because of this characteristic of the respiratory movements in infants the condition of the abdominal viscera is of prime importance. One may get very marked dyspnea from abdominal distension. As with the pulse so the respirations are inclined to be slow in marasmus. Rapid respirations are quite frequently present and in differentiating the causes for these one should never overlook acidosis. During the respiratory act one should know the condition of the suprasternal notch. In case of enlargement of the thymus this is likely to be depressed on inspiration. Any obstruction to the breathing in these babies, such as pressure from the thymus, acute laryngitis, adenoids, etc., is likely to be manifested in the respiratory movements by marked drawing-in of the lower end of the xiphoid portion of the sternum at the time of inspiration. This, incidentally, if continued in rachitic children, may become permanent, accounting for the so-called funnel-breast.

Of all the symptoms of diseases in infancy there is none so common nor so often misinterpreted as *diarrhea*. It cannot be too strongly impressed on the profession that diarrhea is not a disease but a symptom; that it is perhaps the most frequent symptom which we encounter in infancy; that it is apt to occur in almost all of the disease processes at this age, especially in acute diseases. As I have stated above and as I wish to repeat here, the question of its importance depends on the relation of the severity



of that diarrhea to the general condition of the patient. A slight diarrhea with a high fever means almost invariably that the condition is not of gastro-intestinal origin. And, on the other hand, a very severe diarrhea with high fever usually points to the gastro-intestinal tract as the origin of the condition.

While too much attention has been directed toward diarrhea as a symptom of disease in childhood, too little notice has been taken of *vomiting*. Very often we are prone to pass rather summarily over a case of which vomiting is one of the symptoms and assure the patient that vomiting is of little significance. While it is true that in a certain proportion of cases vomiting is not a symptom of great importance, at the same time it is important in a sufficiently large number so that we are not justified in neglecting it in this fashion without a thorough examination of the patient. Especially is this true where we have projectile vomiting in the first few days or weeks of life. Nor is it an easy matter in many cases to differentiate between pyloric stenosis and pylorospasm. Although, of the causes of vomiting, these two conditions are the first which come to our minds, they are by no means the only or most frequent causes. More often vomiting may be regarded simply as a part of a clinical picture of a nutritional disturbance, or perhaps it may be one of the symptoms which initiates an acute febrile condition.

We come now to the consideration of a condition which is comparatively frequent in infancy, one whose clinical features are especially harrowing and whose outcome is by no means always that of recovery. I speak of *convulsions*. For many years I have studied convulsions, mainly from a clinical standpoint, and I am struck with the fact that even among pediatricians, the ideas of convulsions are usually chaotic. There has been little tendency to classify the causes and characteristics of each type of convulsion and as a consequence there is little effort on the part of the physician to differentiate these. I will mention only a few causes of these, the commoner ones:

Spasmophilic convulsions occur in artificially fed infants who have rickets and frequently are constipated. The convulsion is often initiated by the inspiratory crow of laryngismus stridulus and is often repeated at short intervals. Perhaps this is the most common of convulsions at this age. There is a type of convulsion which initiates acute febrile attacks. This ordinarily occurs singly, or at the most twice, and usually is to be encountered at the very onset of the trouble. At this age we rather frequently encounter convulsions due to some pathology of the brain or its membranes. These are the principal causes of convulsions at this age. We

must also, of course, consider uremia, epilepsy, intoxication from drugs, and the type of slight convulsion which occurs in severe cases of marasmus as a terminal symptom.

Closely allied with the question of convulsions is that of the *state of consciousness* of the infant. In a general way we may say that in infectious processes the child seems alert and there is a tendency to twitching, perhaps to convulsive seizures. In intoxication, however, the opposite is true and the child may very rapidly pass into a state of coma. Coma in these infants is, however, usually of rather short duration, though at times, of course, as for instance in cases of meningitis, the coma may be prolonged for many days.

Before we quit the subject of symptoms some words about the *crying* of infants might not be inappropriate. It should always be remembered that when an infant cries it cries because of some discomfort, either physical or mental. In the vast majority of instances the baby cries because it is spoiled. This is evidenced by the fact that practically every child when brought to a hospital and placed in a ward ceases crying within two or three days. In almost every instance the mother ascribes crying to one of two things, hunger or colic. In the vast majority of cases neither of these is to blame. When one sees the difference between the attitude of the infant or child in the institution from that of the child in the home one is almost tempted to take up with the bolshevistic idea of the state rearing of children.

Some points on the *physical examination* of the infant would, it seems to me, be appropriate at this time. We have already mentioned the fact that one cannot follow the ordinary routine in examining cases of this age. There are certain things which stand out in contradistinction to the physical examination of the adult and on which stress should be put. First, in the matter of abdominal palpation. It is not possible to tell an infant to keep the mouth open and relax the abdominal wall. The plan which has seemed most successful to me has been to slowly but gradually break the resistance of the abdominal muscles with the palm of the hand and use the fingers for palpation. It is of especial value at this age to look for enlargements of the spleen and liver and any abdominal masses, such as enlargement of the mesenteric glands. One should never omit examination of the throat and the quickest and simplest way is to introduce a tongue depressor immediately back to the pharynx, thus producing gagging, getting a good view of the tonsils and nasopharynx. The act of withdrawal should be as rapid as that of introduction.

Certain groups of lymphatic glands are especially important in the infant; enlarged epi-

trochlears, for instance, are often the first thing to lead one to suspect congenital syphilis. In palpating for the epitrochlear I have usually found it advisable (in examining, we will say, for the left epitrochlear) to grasp the forearm of the infant with your right hand and with the fingers of the left hand close together starting at the upper edge of the inner supracondylar ridge to bring the fingers down toward the elbow joint, keeping the supracondylar ridge between the middle and ring fingers. For examination of the right side the hands are changed. In this way it is possible to palpate even the smallest glands and one rarely misses them. Enlargement of the intercostal glands is not ordinarily looked for and yet I have never seen it fail that where one can detect enlargement of the intercostal gland on both sides congenital syphilis is present. These glands usually lie in the axillary region of the third or fourth interspace. Happily they most often occur in thin infants because they are not easy to palpate since they slip between the ribs. They are, however, readily seen when the arm is stretched upward and when seen can usually be palpated.

In examining for rachitic rosary one should never begin by palpating up and down across the ribs but should start with the finger on the sternum, passing them around along the long axis of the ribs toward the axillary region. The reason this method is the best is that there is a varying length of the costal cartilage depending on the age, and one is very likely to expect to find the costochondral junction to be closer to the sternum than it actually is.

In examination of the chest one should never fail to percuss carefully along the spines of the dorsal vertebrae in order to get evidence, if possible, of enlargement of the peribronchial glands, nor should one fail to pay special attention to the substernal space above the heart where the thymus is to be found.

There is one point more in the physical examination of these infants. Especially in nutritional disturbances, the state of the subcutaneous tissue is of the greatest value in estimating the condition of your patient. One should therefore examine carefully into the state of the subcutaneous tissue and into the elasticity of the skin.

It seems to me that in the present period of medical progress there is a very definite tendency to put too much dependence on laboratory aids. No one deprecates this more than the laboratory man. He repeatedly warns the clinician of the pitfalls, but I think we are all so anxious to grasp something definite that we are all very much inclined to regard the laboratory findings as absolute. No one better than I realizes of what great value laboratory aids

are to all of us and in every branch of medicine, but I am not prepared to regard them as of paramount importance, nor do I feel that one can make diagnoses with laboratory aids alone. It is just as necessary to interpret the findings of the laboratory as it is the physical findings and we, as physicians, must recognize that all the important landmarks of disease are to be found with our fingers, eyes and ears and such findings are only to be confirmed by laboratory data. With this attitude clearly fixed I think we can go on and consider in what way the laboratory may be of aid to us.

In the first place urine analysis—while it is true that disturbances of the urinary tract, especially the kidneys, are not so common as they are in adult life, it is also true in infancy that one of the most common causes of acute febrile disease is pyelocystitis. Nephritic conditions are relatively rare but pyelocystitis is a very common affection and to discover it, it is absolutely necessary that we examine the urine. A point in regard to this examination is that in looking at the sediment there is no advantage, rather a disadvantage, in centrifuging. The urine shaken up and placed on a slide under low power will tell us all that we want to know. If there are not sufficient pus cells to be found under these circumstances we would gain no more knowledge by centrifuging. More and more examination of the cerebrospinal fluid is being carried out at this age. This examination is not only of value in cases where we suspect some inflammation of the meninges but it is of the greatest value in confirming our suspicion of congenital syphilis.

Blood counts are of the greatest value. When they are done as routine one is struck immediately by the fact that very few apparent anemias are real, while the number of white cells is in general subject to the same changes as in adults. A notable exception is to be found in a case of tuberculosis which so frequently at this age assumes the type of miliary tuberculosis. In practically every instance which I have seen, no matter what the stage of the disease, there has been a leukocytosis rather than a leukopenia.

The value of the Wassermann reaction is the same here as in adult life with the reservation that we can put no dependence whatever on the Wassermann in the first few weeks of life. It should be definitely stated that a positive Wassermann without clinical symptoms to back it up is of very little value, and that we must still in congenital syphilis depend on our physical findings using the Wassermann only as confirmatory evidence.

The tuberculin test, especially the skin test of Pirquet, is of more value at this age than any other, not so much because the test itself is different as because tuberculosis at this age is nearly always an active process, and there-



fore the positive skin reaction is more often of value in determining our diagnoses. There is one exception to this fact, the reason for which I do not know, but in the case of tuberculous peritonitis in these infants, not in those which are terminal cases or which had recently gone through an attack of the measles, the Pirquet reaction is very frequently negative. In fact in my experience it has been more often negative than positive.

We now come to the last of our laboratory aids and probably the one which is the most valuable, and that is the roentgen ray. We are coming more and more to use the roentgen ray to help us in our diagnosis. Especially is it valuable in conditions of the bones and the lungs. In the former the interpretation is usually comparatively easy; in the latter it is frequently very misleading and oftentimes impossible. In interpreting the roentgen-ray plate one should never lose sight of the clinical picture and unless one keeps his balance he is very frequently led astray by the interpretation which he places on the roentgen-ray picture. Positive assertions cannot be made. There is one point, however, in regard to lung conditions in infancy where the roentgen ray may be of the greatest value and that is in differentiating between bronchitis and miliary tuberculosis. In the former the physical findings are likely to be more marked than the roentgen-ray picture would seem to indicate, while in the latter the lung involvement as shown in the roentgen-ray picture is out of all proportion to the physical findings. I feel that the roentgen ray as a diagnostic measure in congenital pyloric stenosis has not been of much value. After a rather thorough investigation I have come to the conclusion that my diagnosis has not been aided materially by the roentgen-ray picture and of late I seldom resort to this aid.

It seems to me it would be well now after having taken up a few of the points in the question of diagnosis in infancy, to look to the errors which are commonly made and try to get at the real causes. It seems to me that the first cause of errors in diagnosis in infants is the tendency of physicians to apply the principles of diagnoses and their interpretation from the viewpoint of the adult. I hope that I have been able to make it plain to you in this discourse how much there is of difference between the adult and the infant and how little we can rely on the interpretation of symptoms as we have learned them in our course in physical diagnosis in the adult. Of course carelessness and failure in physical examination enter into the question here as in all other stages of medicine. None of us are perfect and none of us do all to make a diagnosis that we should do in many cases. This however is no excuse for the fact

that many of us never think it necessary to remove the clothes of the infant. Then again there has been the tendency on the part of the profession, which tendency is happily fast disappearing, of belittling the scientific practice of pediatrics as compared to other branches of medicine. I have always noticed that the physician who is always anxious to belittle the results of infant feeding takes the least time to call in a pediatrician when his own baby is ill. Most of our better physicians now are acknowledging their deficiencies in respect to pediatrics and doing their best to overcome them.

Another cause of error lies in the failure to employ laboratory aids, usually because of the inconvenience involved. Strange as it may seem, the one thing which has brought pediatrics before the medical profession, that is, infant feeding, has tended to make the profession underestimate diagnosis at this age. Infant feeding is only a therapeutic measure, except in rare instances where we use a therapeutic test in a diagnostic way. As a therapeutic measure it must, as must all therapeutic measures if it is to be properly applied, be preceded by diagnosis. It seems to me that these points sum up pretty well the causes of errors.

Now what are these errors? As I have seen them the error of greatest importance is that too frequently the diagnosis of some nutritional or gastro-intestinal disturbance is made without sufficient data on which to base it. Another is the failure to diagnose the cause of convulsions, and this is very closely allied to the next one, the tendency to diagnose meningitis without sufficient evidence. Probably more than any other disease pyelocystitis is overlooked and this because in the case of high temperature examination of the urine as an aid in diagnosis is not even thought of. Then we must admit that there is a woeful lack of knowledge on the part of the profession in regard to certain common disorders of infancy. Among these may be mentioned such common things as pyloric stenosis, miliary tuberculosis, congenital syphilis and nutritional disturbances.

However with the urge that the war situation has given us and with the respect for medicine which the present circumstances have commanded from the general public, and with the awakening of the people of this great country to the need for proper investigation on the problems of children, we may look forward to the future with a great deal of hope. We must first recognize that in pediatrics, as in every other branch of medical science and art, diagnosis is the prime requisite. We must impress on the students and on the faculties of our medical schools the importance of this branch of pediatrics and that it is a separate and distinct branch in the study and practice of medicine.

104 South Michigan Avenue.

# INFLUENZA IN FRANCE (IN A. E. F., 1918)\*

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We hesitated to call the disease influenza. The employment of this term suggested that the disease was due to infection with bacillus influenzae and the rôle played by this organism was to say the least, questionable. In one area in which the disease was epidemic the medical officers solved the difficulty by calling the affection by the nonpoetical and noncommittal name "Plufus."

In 1917 the A. E. F. had an epidemic of bronchopneumonia with empyema which had a very high mortality even though it did not attain the proportion of the epidemic of streptococcus empyema that raged in our camps in 1917. In August, 1918, the A. E. F. was visited by a mild disease, called over there "three day fever" much like our usual grip. Later in the fall, after troops began to arrive from this country in large numbers, the real "influenza" began.

Of academic interest only is the question as to where the epidemic originated. Transports coming over in September were loaded with influenza cases and the number of burials at sea ran up into the hundreds. Transports landed in England or France and were practically hospital ships. Many boys were carried on stretchers directly to a hospital, most of them to die. The others were sent from the base ports to the interior to concentration areas and they dropped like flies on the trip. From Brest, St. Nazaire, and Bordeaux the influenza highways penetrated to the interior.

The disease presented a very characteristic clinical picture and differed, as far as I can learn, in no wise from the influenza in the States. Its onset was most acute; a man perfectly well a few hours before would be admitted to the hospital in an alarming condition. Nose bleed was very common at the onset. Cabot, in a large series, found epistaxis in a larger percentage of cases than would have been expected in a like number of typhoid fever patients. The fever varied, as one would expect, but usually ranged between 102 and 103. The patient was deeply cyanotic and had a most harassing cough. Any change in position would call forth a seizure of coughing. The pulse was relatively slow. It was not unusual to find a patient with temperature of 103 and a pulse of 90. The leukocytes were not increased, indeed a leukopenia (as low in cases as 1,200) was the usual finding. A high degree of prostration and asthenia was most impressive. The physical signs were meager. Examination of the

lungs revealed the presence of numerous râles, mainly subcrepitant. Dulness appeared only late with coalescing of bronchopneumonic areas or the formation of pleural exudates. None of the fatal cases that I saw went to necropsy with a diagnosis of influenza. I was not able in all cases to get definite signs, according to our older notions, of a bronchopneumonia. Many of the men wanted to call the condition in the earlier days at any rate, influenza with bronchitis. I insisted that they take the stand that in these cases every bronchitis was a bronchopneumonia.

Here I want to call attention to the danger of relying on statistics. In some hospitals many deaths were reported from influenza. In some only the very sick were called bronchopneumonia, and in these the mortality from pneumonia was 80 to 100 per cent. In other hospitals every case was called bronchopneumonia and these had, naturally, a small percentage of deaths. I am reminded of what Lord Beaconsfield once said, "There are three kinds of lies, (1) lies; (2) damn lies; (3) statistics."

For want of a better name, however, the disease was often called influenza. Men like General Thayer, who had lived through and, some of them at least, been victims of the pandemic in 1889, identified it clinically with the "influenza" that prevailed then. The organism discovered by Pfeiffer in 1890 had been accepted by the medical world as the cause of the pandemic of 1889. Our bacteriologists were not willing to call the *B. influenzae* the cause of the epidemic of 1918. At a conference in Dijon bacteriologists from all parts of France and England where American troops were quartered discussed this problem and came to no definite conclusion. It was the opinion of the majority that the bacillus influenzae was not the cause of the pathological processes that loaned to the disease its sinister character. The few experiments that had been made to show that a filtrable virus was the infectious agent were discarded as inconclusive. The secondary pulmonary manifestations were most carefully studied. Cultures were made from pleural exudates, bronchial secretion, lung tissue and heart's blood. The organisms thus isolated were spoken of as secondary invaders. In different parts of France different organisms were obtained, invariably the same organism in all the cases from one section. Thus in Le Mans the base laboratory reported a hemolytic streptococcus, in Brest a pneumococcus, in Bordeaux a meningococcus. This last organism had previously been identified as the cause of pulmonary processes in a very few cases, but in Base Section Bordeaux it was isolated from many cases of bronchopneumonia. Its identity was established beyond question of doubt by cultural and serological

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



methods. The final conclusion was that the symptoms and pathological processes might perhaps be due to the influenza bacillus but the serious complications were due to a secondary invader, streptococcus, pneumococcus, or meningococcus.

The important problem as far as treatment was concerned was the recognition and segregation of the early cases. We soon learned that, other things being equal, a man's chances for recovery were largely dependent on his being put to bed as soon after the onset as possible. Hence the necessity for early recognition. Segregation was the most useful prophylactic measure. How desirable it was to take every influenza out of his tent or barracks and away from his mess mates needs no elaboration. Those of you who are familiar with the army sick call know how easily early cases may be overlooked. The responsibility for detecting these cases during the epidemic was put squarely up to the regimental surgeon who in most instances did his task well. Specific therapy of any sort was not attempted in the A. E. F. We insisted on absolute bed rest, as I have said, from the beginning. We treated these cases as we would any severe toxemia and felt that one of the two most useful measures at our command was the use of water. This we gave by mouth and by rectum. To the very sick boys, those that were profoundly prostrated, markedly cyanotic, very restless, in other words, those whom we considered highly toxic, to these we gave intravenous injections of sodium bicarbonate or glucose. The other really useful therapeutic agent that we had was morphin. This we used in liberal doses for pain, exhausting cough, and restlessness. It is the one drug I would not care to do without in the treatment of these cases. In some of the hospitals to which I was consultant, digitalis was used routinely, in others only when special indications for its use were present. This was left to the chiefs of the medical services at the various hospitals. The patients who received it from the beginning did no better, as far as I could see, than those in hospitals in which it was not used.

The question of hospitalization was an important and perplexing one. The necessity for early treatment was recognized and the natural place to carry it out was in a hospital where the men might have medical attention, the care of trained nurses, and the other advantages that a hospital afforded a sick soldier. But the nearest hospital was often 10 to 30 miles away, and the trip had to be made in a Ford or G. M. C. ambulance over roads that had been much trucked and that had had no attention for four years. Such a large percentage of men arrived at the hospital after such a ride either dead or

dying that the inadvisability of thus transporting sick soldiers soon became apparent. It was manifestly unwise to take the soldier to the hospital; the problem was how to take the hospital to the soldier.

In late October, 1918, I spent some time at Clermont Ferrand, an artillery training center whose strength was then about 20,000. The men were billeted in small towns in the area, and were being sent into the hospital at Clermont daily and the mortality was alarmingly high. With the chief medical officer of the area I visited some of the villages in which the morbidity was highest. At these we would pick out one or more buildings (or parts of buildings), chateaux, convents, schools, or private residences, and designate them as hospitals for the troops in that village and its immediate vicinity. These made very crude hospitals, some without water, some without heat, all without toilet facilities. The regimental surgeons were put in charge, ranges were installed, cots or ticks obtained from the nearest supply depot and enlisted men of the medical department used as nurses and ward attendants. It was a far cry from these hastily improvised shelters to the modern hospitals of our large cities, but we had to make the best of the urgent situation. There can be no doubt that the soldier's chance for recovery was improved by sparing him the long, cold ride over roads that had once been the pride of France but that heavy hauling and neglect had made much like the highways in some of the less densely populated parts of our state.

Wall Building

#### SYPHILIS AS AN ETIOLOGICAL FACTOR IN EPILEPSY\*

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Although epilepsy is defined on the basis of an entity as a chronic disease characterized by recurring attacks of loss of consciousness, with or without tonic or clonic spasms, or both, it is in reality but a syndrome resulting from various conditions which through their action on the brain produce a sudden involuntary discharge of nervous energy. In other words, it is the manifestation of the involuntary conversion of potential into actual energy through instability of the cerebral neuron hierarchy—either an excessive irritability of the sensorio-motor centers or diminished control (inhibition) through debility of the psycho-motor area.

Since epilepsy is but the manifestation of

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.

various conditions, some known and discoverable by a thorough and complete examination, others unknown and not discoverable even *post mortem* by any means yet known—so-called idiopathic—it is impracticable to study the various causes and theories in a single essay, hence, we shall confine our discussion to but a single causative factor, viz., syphilis.

Although it is generally recognized that syphilis can and does cause epileptic manifestations which are indistinguishable from true or idiopathic epileptic spasms, there is a wide variation between different observers as to the frequency of syphilis as an etiologic factor, at least to the degree that it may be considered the sole cause. That it is the single causative factor may at times be impossible to demonstrate, since it is generally recognized that there are always two elements in the development of every disease, viz., the predisposing cause, or the condition of the system which permits the development of the disease, and the direct exciting cause, or that which precipitates or "kindles" the disease.

It is generally recognized that syphilis may operate, (1) through the mechanism of an overwhelming toxemia; (2) through the effects of a meningitis, encephalitis, gumma, endarteritis of the finer vessels, exostosis, etc., and (3) as a hereditary factor through a basic impairment of the germ plasm.

It appears evident that there must be a peculiar condition of the nervous system, inherited or acquired, that enables an irritant, whether toxic or otherwise, to produce stereotyped attacks in certain individuals and not in all having a similar exciting factor.

That this predisposing condition may be due to a basic impairment of the germ plasm though not demonstrable by present methods of investigation, is recognized by many observers.

Bingswanger<sup>1</sup> speaks of a dyscrasic form of heredity syphilitic epilepsy. Mott writes that, "the question whether syphilis of the parents can modify the germ plasm so as to render it biochemically unstable, whereby a slight excitation suffices to produce a fit, like the spark in a powder magazine causes an explosion, is one that cannot be satisfactorily answered. Yet we should rather expect that such a poison could influence the germ plasm so unfavorably as to affect the proper development of its most complex and highly differentiated product—the cerebral cortex." The author continues: "without attempting to give any precise data, I am of the opinion that syphilis and alcoholism of the parents may influence the germ plasm and per se lead to the production of imbecility and symptomatic epilepsy."

On the other hand, it is well known that syphilitic focal lesions or syphilitic toxemia may be the direct exciting cause, from which it appears possible that syphilis may in a given case be both the predisposing and exciting cause of epileptic attacks.

Most text books merely refer to syphilis as one of the causes of epilepsy without any reference to its frequency or the manner in which it acts.

Clinicians who give any consideration to the frequency of syphilis as an etiologic factor differ in their conclusions and few have found it to be a very frequent cause.

Dana<sup>2</sup> writes: "The Wassermann test for syphilis in epileptics has brought but a small percentage of positive reactions."

Spear<sup>3</sup> says: "Syphilis may be the etiological factor in generalized epileptiform seizures, but in most cases the epileptiform seizures that occur in cerebral syphilis are merely symptomatic of the underlying disease."

Osler believes that convulsive seizures due to acquired syphilis of the nervous system is very common.

Bingswanger asserts that congenital syphilis plays a much more important predisposing role in the production of epilepsy than is generally imagined.

Nonne<sup>4</sup> writes: "Everyone who has seen many cases of epilepsy knows, that frequently a syphilitic infection stands alone as the only etiological factor though this is the kind of epilepsy which cannot be distinguished from the idiopathic form." He mentions a post syphilitic form in which attacks of petit mal sometimes occur between the severe attacks.

Church<sup>5</sup> writes that, "Syphilis may be casually related to epilepsy in various ways: (1) as a hereditary factor; (2) through the malnutrition of the secondary period; (3) by local encranial disease; and (4) Fournier thinks there is a peculiar syphilitic variety of epilepsy appearing late in the luetic history."

Spratling<sup>6</sup> states he is "unable to present figures that indicate the frequency with which inherited syphilis predisposes to epilepsy, or causes it in any form, essential or unessential, and must be content to state that its power in either of these directions must occasionally be reckoned with."

Available statistics give syphilis as infrequent in epileptics (from 5 to 14 per cent.), while reports of most serologists give a small percentage of positive Wassermann reactions in both the blood and spinal fluid, with variable and inconstant findings in the latter as to pres-

2. Text Book of Nervous Diseases, eighth edition, p. 475.

3. Manual of Nervous Diseases.

4. Syphilis and the Nervous System, second edition, p. 173.

5. Nervous and Mental Diseases, Church & Peterson, 8th ed., p. 641.

6. Epilepsy and Its Treatment.

1. A System of Syphilis, by Powers & Murphy, Vol. 4, p. 441.



sure, pleocytosis and globulin content, though frequently there is a considerable deviation from the normal reaction of the Lange colloidal gold test.

Kaplan<sup>7</sup> records only four out of thirty-eight sera from epileptics as giving a positive Wassermann reaction and states that, "the Wassermann reaction on the cerebrospinal fluid was negative in every instance, the original Wassermann method being used. In one case with a positive Wassermann reaction the serum in the cerebrospinal fluid also showed twenty-three lymphocytes per c.m. The etiologic factor in this instance was most likely syphilis. In another case with a positive Wassermann reaction the symptoms disappeared entirely after antiluetic treatment; the positive Wassermann, however, remained unchanged. The reaction was performed three times with the same result. That syphilis plays an important role in some epileptics must be conceded."

While it is true that an epileptic with syphilis is not necessarily a patient with syphilitic epilepsy, it may possibly be true that epilepsy may be due to syphilis notwithstanding a negative blood serum and cerebrospinal fluid. It is known that syphilis may be present notwithstanding a negative Wassermann of both blood and spinal fluid, especially by the original Wassermann method, viz., with a small quantity (.2 c.c.) of the fluid, so that it is not improbable that it may be undiscoverable by any of the known methods of examination, especially if it be true, as previously noted, that syphilis may act through a "basic impairment of the germ plasm."

If it is possible for syphilis to be present in an epileptic without giving any diagnostic evidence, it may be argued that the disease should at any rate respond to antiluetic treatment, which is untenable; since a disease or condition is not necessarily cured by treatment directed to the cause: hence, the fact that symptoms presumably due to a frank syphilis, do not recover after all clinical and serological evidence of syphilis has disappeared, does not necessarily argue against a syphilitic origin.

This should be so evident as to require no proof, though it is often overlooked, because we are so accustomed to favorable results in the treatment of syphilis that doubtful cases are often decided by the "therapeutic test."

Another source of error arises from depending too much upon the laboratory findings and too little upon the findings of a critical clinical examination.

M. H., female, aged 12, pupil, came under observation March 14, 1915, with a history of typical grand mal epileptic attacks of several months duration; at first, attacks occurred every two weeks but soon increased in number until she was having several attacks

each day, together with ten to twenty petit mal attacks, one of the latter of which occurred during an ordinary consultation in my office.

Family history: negative; father died of pneumonia.

Personal history: ordinary diseases of childhood, from which she made good recoveries; no history of injury; no coffee; drank one cup of tea daily until after attacks began; for some time prior to attacks, complained of being tired and had slight periodical headaches; sleep poor, occasionally marked sleeplessness; appetite variable; bowels regular; kidneys act normally; first menstruation two months ago, flow scanty, no pain; no return.

Objective examination: well developed; weight 71½ pounds; no evidence of injury to head; musculature of eyes good though pupils do not dilate fully and contact sluggishly to light; nostrils free; no enlarged tonsils; tongue coated with white fur with papillae showing through; teeth in good condition; all superficial cervical, and the submental and epitrochlear, lymphatic glands easily palpable; the left epitrochlear gland being as large as a small hazel nut; thyroid normal; all tendon reflexes exaggerated; no pathological reflexes; no ankle clonus; blood gave a four plus Wassermann reaction.

Patient placed on mixed treatment of mercury and sodium iodid, with sodium bromid to control the attacks. The iodid was rapidly increased to 60 drops of a saturated solution three times a day.

Attacks rapidly decreased in frequency until June of the same year when she had one attack, after which she was free until August 9, nearly five months after beginning treatment, when she had a nocturnal attack at 5:30 a. m., which proved to be the last attack, though the patient has taken nothing to control the attacks for over eighteen months during which time she has attended school and taken piano lessons, making unusually rapid progress in both.

The day following last attack, August 15, 1915, the thyroid gland was noticeably enlarged, pulse 96, no exophthalmos and no tremor. The swelling disappeared in about three weeks.

On account of a great deal of illness in the family it was impracticable to have other Wassermann tests made but patient is now off treatment with that object in view.

Mrs. L. S., aged 24, married four years, never pregnant, for which she could assign no cause, came under observation Sept. 23, 1915.

Family history: negative, save paternal grandmother had epilepsy after 60 and continued at infrequent intervals until death at 80.

Personal history: seriously ill with scarlet fever when 10 years of age, apparently complete recovery; several attacks of night terrors when 9 years of age; less than one cup of coffee a day; sleep poor and accompanied by "visions" during which she feels as though in a trance; tired mornings; appetite poor; bowels move only with aid of medicine. No history of injury.

Has had diurnal and nocturnal attacks of epilepsy for past several years, and though she has been under almost constant treatment, changing physicians several times, the attacks have grown progressively more frequent until she has from ten to twenty in twenty-four hours, most of which are of the petit mal type.

The diurnal grand mal attacks are ushered in with a scream after which she falls, bites tongue, froths at mouth, has tonic and clonic spasms, after which she attempts to tear off clothing, all lasting about five minutes, followed by sleep. The nocturnal attacks occur every half hour and characterized by screaming and acts of violence, followed by incessant incoherent talking for several minutes.

7. Serology of Nervous and Mental Diseases.

Objective examination: patient is tall, thin and anemic; no evidence of injury to head; pupils active; impacted cerumen in both external auditory canals; nostrils free; tongue coated; tonsils not enlarged; teeth in good condition; all superficial lymphatic glands palpable; all tendon reflexes exaggerated; no pathologic reflexes; no ankle clonus; no Rombergism; blood pressure, 90; urinalysis: clear, colorless, specific gravity 1005, no albumen, phosphates in excess, quantity in twenty-four hours, 4 pints. Since last attendant had taken specimen of blood on which no report could be obtained, would not consent to another examination. Patient placed on calcium bromid, laxatives and general reconstructives.

October 5, only two attacks past twenty-four hours. Urinalysis: light yellow, clear, specific gravity 1008, trace of albumen and excess of phosphates.

Nov. 2, 1915, improved; urinalysis: clear, light yellow, acid, specific gravity 1.012, no albumin or excess of phosphates; quantity twenty-four hours, 4 pints.

Nov. 8, 1915, was called to visit patient and found her confined to bed, and learned attacks had increased in frequency, though most of them were of the petit mal type.

Patient placed on mercury and iodid and the attacks held in check by the use of ascending doses of bromid of calcium, fortified with Fowler's solution of arsenic until it caused a disfiguring acne of the face and back, when it was replaced by brometone. Patient made but slow progress; the legs later becoming edematous without apparent cause other than debility, but gradually disappeared in a few weeks under the use of diuretics, which caused the urinary output to increase to 4 quarts in twenty-four hours.

Was confined to house until May 18, when she called at the office, though having a petit mal attack almost daily.

As attacks decreased in number, she began having attacks of violent temper to which she was unaccustomed, and which she recognized and deplored but could not control.

No attacks from June 23, 1916, to Jan. 24, 1917, though she was taking only four capsules of brometone a day to control the attacks, but had received large doses of iodid and mercury either concurrently or alternately.

May 24, 1917. Returned on account of a mild attack and stated that, believing she had recovered, she had discontinued treatment after her last visit in January.

Sept. 14, 1917. Reports attack August 24, the day prior to menstruating—the first period for eighteen months. Placed on iodid, mercury and four capsules brometone daily.

Jan. 17, 1918. No attacks; blood Wassermann, negative, but antiluetic treatment continued.

February 6. No attacks; thyroid enlarged, pulse 78.

March 19, 1918. No attacks.

November 19. Returns on account of grand mal attack, November 3. Had again discontinued treatment believing she had recovered. Objective examination: negative, save thyroid slightly enlarged and knee jerks considerably exaggerated.

A short time after the above visit the patient contracted influenzal pneumonia from which, her physician reported, she died a few days thereafter.

It will be noted that clinically these two cases appear identical save for recurrences in the latter case which evidently were due to discontinuing constitutional treatment, yet the former gave a four plus Wassermann reaction of the

serum while the latter was negative, though it is true, the blood test was made after the patient had taken the iodide and mercury, the latter of which however had been discontinued some time prior to the examination.

Though some of my cases of epilepsy have shown only a two plus Wassermann and a few but a one plus reaction, I am treating them as though specific in origin with encouraging results, though it is too early to record conclusions.

Those giving a one plus Wassermann have been almost entirely children or women in whom I had reason to believe that if syphilis were present at all it was hereditary.

While unprepared at this time to give data I am able to state that in my experience of the past several years the proportion of epileptics giving a Wassermann reaction in some degree is much greater than that given in available statistics and I feel confident that the laboratory has not detected all cases in which syphilis was, either directly or indirectly, an etiologic factor.

Metropolitan Building.

#### WORK OF THE NEUROPSYCHIATRISTS IN THE U. S. ARMY CAMPS\*

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In the beginning of the great world war, England and France had no special means of eliminating the nervous and mentally unfit from army service and as a result both countries soon had a greater proportion of neuroses and psychoses than should have obtained had a careful examination of recruits been made by competent neurologists and psychiatrists.

When the United States first entered the war our position regarding neuro-psychiatric examination of recruits was about the same as that of England and France at the time of their entrance into the war, and consequently our first contingent of troops which were sent overseas had not been subjected to a special examination along that line.

In order that we might profit by the mistake which our allies had made, it was urged upon our government that it was just as important to ascertain the nervous and mental qualifications of recruits as it was to establish their physical status so finally, after the war had been in progress for some time, a department of neuro-psychiatry was formed, with Col. Pierce Bailey as chief with headquarters in the same building with the Surgeon-General.

Then an effort was made to interest as many neurologists and psychiatrists as possible and

\* Read at the Sixty-Second Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



get them to enlist in the army in this special branch of the service. Several hundred responded to the call of their country and were assigned to the psychopathic wards of the various base hospitals and to the neuro-psychiatric boards which were attached to the examining stations at the different camps.

To the neuro-psychiatric boards fell the work of eliminating the nervous and mentally unfit among the recruits. This examination was made in connection with and as a part of the regular physical examination and while it is true that in some instances the attempt was made to unduly rush the work and as a result a few men slipped through who should have been rejected, yet taken in the aggregate this number was very small and these few cases were generally detected later, since the troops had to undergo another neuro-psychiatric test before being accepted for overseas duty.

Indicative of the importance which was attached to the neuropsychiatric service by the military authorities, the following paragraph from a cablegram which Gen. Pershing sent to the Adjutant General of the army is quoted: "For the chief of staff and Surgeon-General U. S. Army. Prevalence of mental disorders in replacement troops recently received, suggests urgent importance of intensive efforts in eliminating mentally unfit from organizations new draft prior to departure from United States. Psychiatric forces and accommodations here inadequate to handle a greater proportion of mental cases than heretofore arriving, and if less time is taken to organize and train new divisions, elimination work should be speeded. Pershing."

In accordance with the above cablegram the Surgeon-General sent a communication under the heading, "Borderline Cases," to all neuro-psychiatrists in the service which read as follows: "It is the opinion of this office that there are no borderline cases in neuro-psychiatry, with the exception of certain cases of mental deficiency and drug addicts. The nervous instability of the psycho-neurotics and those suffering from organic nervous diseases is such that they soon break down even in domestic service and become a burden to the army. If they are not fitted for *full* military service, they are fitted for *no* military service. Many of the cases of mental deficiency may be found fitted for labor battalions or domestic service. This is particularly true of the negro troops. At present no facilities are available for treating and rehabilitating the drug addicts."

So in carrying out the instructions of the Surgeon-General, the neuropsychiatric service stood in a class by itself, because from a physical standpoint a recruit might be placed in class A, B, C, or D according to his qualifications, but the neuro-psychiatrist knew no mid-

dle ground, for he either put the applicant in class A and accepted him for full service, or grouped him in class D as rejected, to be returned to his local board. The only exception to this rule was in a few cases of mental deficiency among negro recruits who were recommended for service with labor battalions because the psychological board had found their intellectual level to be slightly below the standard of 10 years.

The average neuro-psychiatric board consisted of five or six members and as a rule worked in two sections. In the course of the regular routine examination the recruit came before the first section of the board where he was given a short neurological and psychiatric examination, and if there was even the suspicion of any abnormality he was referred to the second section where he was subjected to a very careful examination and either accepted or finally rejected. If there was still doubt regarding his case he was sent to the psychopathic ward of the base hospital where he was closely observed and all necessary tests made to determine his true nervous and mental status.

When the draft first began in the fall of 1917 the instructions to the local boards were not very clear and explicit and were sometimes difficult to properly interpret, so as a result a number of recruits were found unfit for service when they were examined by the special boards at the camp and consequently were returned to their local boards.

It seemed to be a prevalent idea in the beginning of the war that if a fellow didn't have sense enough to make a living or wasn't good for anything at home he should by all means be sent into army service, thereby losing sight of the fact that a soldier to be successful and able to undergo hardships must be sound from a neuro-psychiatric standpoint as well as physically. However as time went on the local boards became more critical and did quite a good deal of eliminating at home.

As an illustration of this fact it might be of interest to give the results of some neuro-psychiatric examinations at one of our army camps as taken from the report of the neuro-psychiatric board at Camp Pike, Ark.:

May 7 to May 26, 1918, No. examined 9,834; No. rejected 199 or 2.02 per cent.

May 26 to June 20, No. examined 10,338; No. rejected 165 or 1.59 per cent.

June 21 to July 16, No. examined 19,178; No. rejected 190 or .99 per cent.

July 16 to Aug. 23, No. examined 22,020; No. rejected 173 or .79 per cent.

Aug. 23 to Sept. 21, No. examined 22,649; No. rejected 123 or .54 per cent.

The steady decrease in the number of rejections at this one camp would tend to prove that

either the local boards were more carefully eliminating the nervous and mentally unfit or that the neuro-psychiatric board was more lax in its examinations but since we had practically the same board during this time and were working under the same instructions, this hardly seems plausible especially in view of the fact that the same conditions obtained with the other special boards at this camp during the above mentioned time.

While this paper has dealt more particularly with the work of the neuro-psychiatrists in connection with the examinations of recruits, we are not unmindful of the splendid and efficient service rendered by our neuro-psychiatrists in the base hospitals both at home and on the battle fields of France and their persistent and scientific efforts in restoring the nervously and mentally sick to health and usefulness.

In conclusion, it would be well for us to continue in civil life the careful and painstaking neuro-psychiatric examinations which were practiced in the army, as doubtless a great many nervous and mental cases would be recognized much earlier, with a corresponding more favorable prognosis as regards the care and treatment.

### CONGENITAL PYLORIC STENOSIS

ROLAND HILL, M.D., C.M.  
ST. LOUIS

While a number of very interesting and valuable papers have been contributed on the subject of congenital pyloric obstruction, it is still imperfectly understood by the profession at large. Scudder, Downes and Richter in this country, and Stiles of Edinburgh, have written exhaustively on the subject. The general profession does not seem as a rule to realize its importance. Our observation at the Bethesda Hospital, in 1,000 young children, has led us to believe that this condition occurs approximately in one case in every 200 babies. By this I mean the true, permanent obstruction caused by the hypertrophy of the circular muscle. The pylorus enlarges and thickens until it forms a smooth, hard, glistening tumor and causes so much narrowing of the opening that at times it is difficult to get a probe through it. Scudder considers that this condition is a true anatomic one and is not dependent on physiological causes. Its etiology is not known but the factor of heredity seems to be an important one as two of our cases have occurred in families where other cases had occurred before.

The symptoms of this disease usually manifest themselves between the third and sixth

week of life. They vary from the slight obstruction known as spasmodic type to a complete obstruction where the pylorus is practically occluded. Before the advent of the symptoms a child may be perfectly normal and then become seriously ill in a very short time. The manifestations of this disease may be considered under four distinct heads: Vomiting, constipation, waves of gastric contraction and tumor. The first symptoms that will attract attention is vomiting. This may be slight at the outset but soon becomes decidedly aggravated. This vomiting is distinctly projectile. The propulsive force is at times so great that a child lying on its side may eject the contents of the stomach for several feet. Vomiting does not always occur immediately after taking food but in the later stages of a severe case, a part or all of the food is ejected after each feeding. There is no fever unless complications arise as a late enteritis. The child loses weight rapidly. Constipation is most marked and in severe cases may be practically absolute. Mucous alone may be in the stools. The urine is scanty and dark in color. The face becomes wrinkled, the tongue and mouth dry and the condition of the child is that of marasmus. The upper part of the abdomen will be found on inspection to be somewhat enlarged. The lower part narrow and empty. At times the outline of the stomach may be seen reaching to the umbilicus. The waves of gastric contraction soon appear and are pathognomic. These waves are due to the contraction of the gastric muscle. They show as a rounded eminence rising at the left costochondral border where it remains for a short time. Then the wave passes across the abdomen and disappears on the right side. Occasionally multiple waves may be seen at one time. They are rarely more than 1 inch in height. These waves usually occur after food is taken. The pyloric tumor can usually be palpated in this disease. It occurs as a smooth rounded mass about the size of the end of the thumb lying at the site of the pylorus. The symptoms mentioned together with the presence of the tumor make the diagnosis positive. Occasionally a co-existing enteritis may tend to obscure the diagnosis. In one case a meningitis resulting from an abscess in the ear proved to be very confusing. As an aid to diagnosis the use of the stomach tube a couple of hours after taking food is of great value. At times all the food will be recovered.

The diagnosis is very clear in a well marked case. The points that may be especially emphasized are: 1. Vomiting. This eventually becomes projectile and in a severe case practically nothing is retained. 2. If the case is one in which vomiting is delayed the insertion of a stomach tube may recover the entire feeding

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



after two hours have passed. 3. The gastric waves that pass from the cardiac to the pyloric part of the stomach are characteristic. 4. The presence of tumor. This can often be distinctly felt just below the margin of the ribs on the right side. It is held that cases in which a tumor cannot be felt are simply spasmodic. This, I believe, is incorrect as I am convinced they are simply cases of minor obstruction.

The treatment may be considered under two heads: (a) medical, (b) surgical. The medical treatment consists in feeding through a tube. This acts well in some few spasmodic cases that vomit if permitted to swallow. However, many of these do badly and have to be operated on later. In the tumor cases, operation alone is indicated. If this is not done, the child will die. The majority of cases of marasmus belong to this type.

Certainly when a child is losing rapidly, operation should not be delayed. The operations that have been performed for this condition are many. Divulsion of the pylorus, pyloroplasty, posterior gastro-enterostomy have all been performed successfully. Posterior gastro-enterostomy was resorted to almost universally for several years and very favorable reports made by Scudder, Richter and Downes. More recently, however, the comparatively simple operation of Ramstadt has been resorted to.

My personal experience in congenital pyloric stenosis comprises 25 cases with 16 recoveries and 9 deaths. Of this number 14 were operated on by posterior gastro-enterostomy with only 6 recoveries. This was undoubtedly due to the fact that after I had done a few of these cases successfully a number were sent to me that had gone beyond almost all chances of aid which contributed almost entirely to my mortality. I have done eleven cases by the method of Ramstadt and ten of them have recovered. This is much simpler, takes but a few minutes and is not attended with anything like a shock of the posterior gastro-enterostomy. The results obtained by this method have been eminently satisfactory. Most of my cases of pyloric stenosis have been operated on at the Bethesda Hospital, where I have had the cooperation of nurses trained in handling young babies. This I found to be a very great aid in the after treatment. My conclusions are that cases of congenital pyloric stenosis should all be submitted to operation if they do not make immediate gain on tube feeding. They will only gain on tube feeding in case the obstruction is very slight. These cases are sometimes termed spasmodic but I believe a true obstruction underlies each one of them. The mortality in the early cases was exceedingly high in the hands of all operators but now it has come down until it is 10 per cent. or lower. These children should be fed on

mother's milk as they do very much better than with some of the prepared foods or modified milk. The improvement after operation is very rapid and a child today that is crying and vomiting all nourishment, the picture of marasmus, may in a week's time present a condition of rapid convalescence and contentment. Under these conditions we would advise that all of these cases be given the benefit of surgical relief unless the condition proves of a milder type and yields to tube feeding.

Lister Building.

#### CONGENITAL PYLORIC STENOSIS, PYLOROSPASM AND CHRONIC APPENDICITIS\*

CARYL A. POTTER, M.D.  
ST. JOSEPH, MO.

The relationship between the stomach and appendix was early recognized by such men as Murphy, Ochsner, Mayo, Finney, Deaver, McBurney and others who succeeded in impressing this important connection on a great majority of medical men in this country but, unfortunately, there are too many yet who have not correlated the two and persist in attributing stomach and intestinal symptoms arising from the appendix to acute and chronic indigestion, colitis, enteritis, gastritis and gastralgia, where if a painstaking history were taken, which is worth about 80 per cent. in the diagnosis, and a careful physical examination made the stomach symptoms could be traced directly to acute recurrent attacks of appendicitis, an appendix of the chronic inflammatory type, or the appendix definitely excluded and some other etiological factor sought.

The layman is hard to convince that a chronic indigestion or so-called "stomach trouble" may come from a grumbling appendix for, even though there is definite pain and tenderness in the region of the appendix, indigestion is the chief complaint and masks the etiology. In acute attacks it is often just as difficult to convince him that the attack usually begins with pain in the epigastrium which may persist there up to or after the rupture of the appendix. Digestive symptoms with or without pylorospasm are frequently so marked as to cover up the local condition and those cases referred for operation which were only recognized near or after perforation. The English profession was far behind the American in recognizing this relationship but are now so convinced of it that Paterson devotes one entire chapter in his "Surgery of the Stomach" to "Appendiceal Gastralgia," a convenient, descriptive term which,

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.

in a paper read before the Royal Society of Medicine in 1910, he originally used to apply to this condition.

Congenital pyloric stenosis caused by hypertrophy of the circular band of muscle fibers around the pyloric end of the stomach manifesting itself about the third to sixth week of life and giving clinical symptoms of incessant vomiting, loss of weight and constipation, palpable tumor and visible gastric peristalsis has been subdivided by some into two distinct groups: (1) Pylorospasm, and (2) true hypertrophic pyloric stenosis. Many claim that the first group requires only medical treatment, the second only surgical. Lewisohn agrees with Holt that such a subdivision is too definitely drawn and that all cases are either mild or severe types and cannot be as definitely subdivided anatomically. Lewisohn considers the cause of the disease a malformation at birth with secondary edema.

There has recently come under my care a family, two children of which have had congenital pyloric stenosis and the third a definite pylorospasm secondary to an appendicitis, which has offered many interesting observations and has made me wonder about the direct or remote relationship between congenital pyloric stenosis, pylorospasm and chronic appendicitis. Pylorospasm is reflex. Congenital pyloric stenosis is hypertrophy plus reflex. Pylorospasm must have a nervous origin or an extrinsic exciting intra-abdominal etiology whether it be duodenal or gastric ulcer, cholecystitis, cholelithiasis, appendicitis, diverticulitis, tuberculous ulcer, syphilis or adhesions. In congenital pyloric stenosis whether the obstruction is mechanical alone due to an overgrowth and increased strength of circular muscle fibers or this feature plus reflex spasm, is not definitely proved, but I am firmly convinced that there is a combination of hypertrophy and reflex spasm which closes the pylorus. Hypertrophy of muscle alone would not give the spasmodic hard tumor mass so easily palpated. Is it not an interesting observation that in three cases to be reported two had congenital hypertrophy of the circular muscle fibers with pylorospasm while the third had pylorospasm, the exciting cause of which was the appendix? In both the pylorospasm was the same—in two the cause the same and in the third different. In both cases of hypertrophic stenosis the roentgen-ray pictures show an occluded opening. In the case of appendicitis the roentgen-ray pictures show a normal, pyloric ring. There was then a familial connection between response to intra-abdominal reflex in all three cases because one seldom if ever sees such a marked pylorospasm in appendicitis. The relationship was not merely a coincident.

CASE 1.—Boy at four weeks developed incessant vomiting later followed by visible epigastric peristalsis, emaciation and tumor mass at the pylorus. Treated medically two to three weeks without relief. Gastro-enterostomy performed. Child promptly died.

CASE 2.—Third child, girl, developed same symptoms at same age. Treated medically until acidosis developed and was then taken to Strauss in Chicago who performed the Strauss operation and the child, although in much worse condition at the time of operation than the previous case, made a complete and uninterrupted recovery. Took nourishment one day after operation without vomiting and gained 2 pounds in a week.

CASE 3.—At two and one-half years the oldest child commenced to have attacks of indigestion which began with pain in the epigastrium followed by vomiting and fever ranging from 99.5 to 101.5 degrees F. From the onset the vomiting was incessant and had a tendency to mask the whole symptomatology. The vomiting persisted for two to four days, everything by mouth being immediately expelled. After two to four days the pulse reached 150 to 160, temperature 103.5, face pinched and drawn, slight cyanosis. Symptoms then gradually disappeared and the child made an uninterrupted recovery. Within the next year the child had two similar attacks and in the year following the attacks became more frequent, first at two month intervals, then one to one and one-half months apart. I saw the child first about the third attack before operation. He was apparently perfectly normal except for slight rigidity over the right rectus and external oblique. Pressure over McBurney's point and at no other place elicited a fit of crying. I was called to see the child that night while he was asleep. Abdominal manipulation did not disturb him until after pressure over McBurney's point when he awoke crying and complained of tenderness. Shortly afterward he developed another attack. During this attack vomiting was the predominant symptom throughout. Knowing the history of the previous attacks I did not attempt to relieve him but decided to observe him during the entire period. The symptoms developed as above described. Examination: abdomen flat. Child was very nervous. Refused anything by mouth or immediately vomited anything taken. Complained of general abdominal pain but very much more tender over McBurney's point. Bowels easily moved by enema. The third day the condition was alarming, pulse 140, temperature 103. Abdomen was scaphoid. Pressure over McBurney's point elicited tenderness exhibited by crying. Cyanosis was present. Bowels normal. Urine showed acetone and diacetic acid for the first time. Glucose and soda enemata, turpentine stupes and atropin sulphate relieved immediately. Child commenced taking food, vomiting ceased, temperature and pulse dropped perceptibly and were normal in twenty-four hours after symptoms had disappeared. Another abdominal examination during sleep elicited marked tenderness only over McBurney's point. Fluoroscopic examinations and plates taken six days after an attack showed no dilatation of the stomach, emptying time normal and normal pyloric ring. Appendix shadows were unsatisfactory. Three weeks later the child had a similar attack which was relieved by stupes, atropin and glucose enemata. Preparations for stomach lavage were interrupted by cessation of symptoms with the above treatment.

*Diagnosis.*—Pylorospasm secondary to a chronic recurrent appendicitis. Between attacks the only physical signs were tenderness and slight rigidity over McBurney's point always elicited when the child was "off guard." Tuberculin and other tests for tuberculosis negative. Appendectomy advised but the



parents could not separate their minds from the similarity of this child's symptoms to the other two children except for the absence of visible peristalsis, tumor and constipation. Dreading another attack they consented to an operation.

A long club-shaped, inflamed, edematous appendix containing two enteroliths was removed. Four months have now elapsed without an attack. The child is gaining in weight and feels fine except for a recent attack of enterocolitis from eating about a pint of green gooseberries. This upset has had no similarity to the previous attacks being a typical attack of ileocolitis.

In considering the diagnosis of pylorospasm one has to consider (1) cholecystitis; (2) cholelithiasis; (3) duodenal and gastric ulcer; (4) neurosis; (5) tubercular ulcer; (6) peritoneal adhesions; (7) diverticulitis; (8) syphilis, and (9) appendicitis, as the exciting causes.

Mayo has often laid stress on the dependency of pylorospasm on a latent diseased appendix. Paterson reports a case which gave typical symptoms of ulcer at the pyloric end of the stomach, including hemorrhage, and at operation he found no visible pathology in the pylorus or duodenum, yet so convinced was he that the pyloric end of the stomach was at fault that he did a gastro-enterostomy without examining the appendix. There was no relief from symptoms. Four months after operation the patient developed an acute attack of appendicitis and the appendix perforated. Removal of the appendix with drainage not only relieved the attack but also relieved the former gastric symptoms entirely. He says that had he removed the appendix at his first operation and omitted the gastro-enterostomy, he is sure he would have relieved the patient at first. This confirms the belief held by most men that gastro-enterostomy is an unjustifiable procedure in the absence of undemonstrable pathology in or around the stomach or duodenum. Bear in mind also the oft-repeated statement of Deaver that three-fourths of the pathology of the right upper abdominal quadrant comes from the right lower quadrant.

The first symptoms of an acute attack of appendicitis are what? Epigastric pain followed by nausea or vomiting, usually only once. Why epigastric pain and vomiting? The answer is simple—pylorospasm. In other words, the first symptom of an acute attack of appendicitis is what the Englishmen call "acute appendiceal gastralgia," and the Americans pylorospasm. The latter is a much better term because it describes a definite pathologic entity, a reflex contraction or spasm in the circular band of the muscle fibers at the pyloric end of the stomach. Are then pylorospasm and congenital pyloric stenosis the same thing? Decidedly no. The first is a reflex spasm or contraction of a muscle of normal size from extrinsic stimulation through the sympathetic nervous system. The

second a spasm due to great power of a congenitally hypertrophied band of muscle fibers plus reflex stimulation.

Why should two members of the same family have congenital pyloric stenosis and the third a pylorospasm? Of course the appendicitis might be coincident but why should the outstanding symptom of the appendix be pylorospasm in a family which has shown this hyperirritability and hypertrophy of muscle at the pyloric ring? There must be some familial reflex relationship at the pyloric rings in such individuals.

It is not my intention to describe the different operations by surgeons for congenital pyloric stenosis except to refer to statistics by the different men. The three operations most often done are posterior gastro-enterostomy, the Rammstedt operation, where the circular band of muscle fibre is split down to the mucous membrane allowing this to pucker through and become covered by scar tissue or omentum, and the Strauss operation in which he splits the muscle, dissects it back and then turns half of each peeled portion across and stitches it to the portion from the opposite side thus covering the mucous membrane. He then stitches the omentum to the closed defect.

Posterior gastro-enterostomy is too formidable an operation, attended by a high mortality, and should be discarded for this condition. The Rammstedt is better but has the disadvantage of sometimes allowing the thin, unprotected mucous membrane to slough and perforation results. The Strauss operation is ideal and statistics recently published by him give three deaths (and these patients almost moribund at the time of operation) in the first sixty cases operated on and prove that it should be the operation of choice.

Carbry Building.

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#### PREVENTION OF ILL HEALTH

An essential factor in any scheme for the improvement of the public health is the need for enlightenment of the people on health subjects. They must be taught how to live healthy lives; how disease in its early stages can be recognized, and how the spread of the infectious diseases can be avoided. Undoubtedly expenditure on education will be amply repaid by a saving in the cost of treatment of persons who have become ill through ignorance of how to keep well. No sanitary problem was ever solved by caring for its victims. Education may be provided either by a health bulletin, filled with trite sayings and striking pictures, issued periodically, containing in pithy language essential points in the prevention of ill health. Popular lectures should be given and cinema films, dealing with health subjects, should be shown in the schools.—*Medical Officer* 22:52 (Aug. 16) 1919.

# THE JOURNAL

OF THE

## Missouri State Medical Association

NOVEMBER, 1919

### EDITORIALS

#### TWELFTH DISTRICT POSTGRADUATE MEETING

The interest that members are manifesting in the postgraduate meetings is a source of much gratification to the Council and other officers of the Association, for the indications point very strongly to a realization of the hopes of the Council and the secretaries when this movement was inaugurated. Our comments have heretofore been prophetic, but now we can present a concrete example of what may be expected from the postgraduate meetings. The first meeting scheduled by the Council was in the Twelfth District, comprising the counties of Platte, Clay, Ray, Clinton, Caldwell, and Daviess, with a membership approximating 130.

The subjects for discussion were suggested by the members in the district and the speakers were engaged in conference with Dr. Franklin E. Murphy of Kansas City, Councilor of the Thirteenth District, as follows:

Acute Bronchopneumonia and Sequelae, Dr. Hugh Hamilton, Kansas City; Dr. O. H. McCandless, Kansas City.

Neuritis: Pathology, Symptoms, Treatment, with Clinical Cases, Dr. G. Wilse Robinson, Kansas City; Dr. A. L. Skoog, Kansas City.

Ulcerations in Digestive Tract, Dr. J. M. Bell, St. Joseph; Dr. W. K. Trimble, Kansas City; Dr. E. B. Knerr, Kansas City.

#### DINNER—SNAPP HOTEL

Hypertension: Pathology and Treatment, Dr. R. T. Sloan, Kansas City; Dr. J. Q. Chambers, Kansas City.

The meeting was held at Excelsior Springs on October 10, from 1 to 10 p. m. Its success may be judged from comments we have received from the officers in charge of the undertaking. Dr. J. J. Gaines of Excelsior Springs, Secretary of the meeting, says:

"There were fifty-two members of the Twelfth District county societies in attendance. The weather was threatening which kept many away who would have come in motor cars. Most of the Twelfth District physicians are hard to keep away from anything of a progressive nature and 'Progress' was written all over this meeting.

"The program was rich in the character of its research material. Dr. Franklin Murphy of Kansas City, whom we may call the sponsor for the 'goods'

delivered, was an interested spectator and participated in the discussions. Our Councilor, Dr. Spence Redman, was one of the first to register, esteemed president, Dr. N. P. Wood of Independence, was in the front row, and every lecturer, equipped with every sort of material for demonstrations, was in form and fettle for the work in hand.

"Dr. Hugh Hamilton of Kansas City gave an up-to-the-hour paper on Acute Bronchopneumonia and Its Sequelae. The doctor brought us the rich fruits of his research work in the base hospital at Camp Dodge, Iowa, one of the most malignant 'flu' centers in the United States. This was followed by Dr. O. H. McCandless of Kansas City, with radiograms of the human chest in all possible stages of postinfluenzal conditions. This symposium alone was worth all the effort put forth to secure the meeting.

"Drs. G. Wilse Robinson and A. L. Skoog of Kansas City spoke on the various phases of neuritis and its treatment. The subject was well covered and a number of clinical cases supplemented the lectures which occupied more than the time allotted to this subject, but the interest was profound.

"Ulceration of the Digestive Tract was ably presented by Drs. J. M. Bell of St. Joseph, William K. Trimble of Kansas City, and Dr. E. B. Knerr also of Kansas City. Dr. Bell's lecture on the causes of ulceration showed profound study of the subject and brought to our ears many experiences of the specialist. The same investigator and Dr. Knerr, 'the man who don't know how to quit and rest,' closed the symposium with the bacteriology of the condition. Again, here was a subject worth going many miles to hear and those present appreciated it fully. Clinical cases carried the work beyond the dinner hour.

"The Pathology and Treatment of Hypertension received its share of study by Dr. Robert T. Sloan and Dr. James Q. Chambers of Kansas City. In the opinion of those attending the meeting the subject could not have been placed with better men. Every phase of this important subject was covered to the minutest detail and the discussion brought out many points of general and special interest.

"The business session retained Dr. J. E. Musgrave as president and Dr. J. J. Gaines as secretary of the postgraduate meetings for one year.

"Excelsior Springs, on account of clinical facilities, was chosen as the next place of meeting on the first Friday in June, 1920.

"Before adjournment Dr. Spence Redman put the question, 'How do you like this plan of work?' The vote was enthusiastic and unanimous approval."

Dr. Spence Redman, Councilor for the district, writes that the meeting was a great success. He thinks there should be "at least one examination of the clinical material made before the society" so that the members can utilize the up-to-date methods demonstrated by the lectures for "we country doctors are a little lax in our diagnostic methods." To quote further from his impressions:

Every county in the district was represented in each case by the most wide-awake representative members of the county societies. The lectures and papers were of a very highly instructive type and the gentlemen who furnished the program certainly deserve commendation for the lucid representation of right up to the minute information on the various subjects presented. In so much as this is purely postgraduate work intended to impart the latest advances and



methods and we are really students I feel that more time than we had should be given to questions and discussion. Especially would I suggest that every man present be encouraged to ask questions about anything that is not made quite clear to him or on any point relative to the subject that is not touched on by the lecturer.

Dr. N. P. Wood, President of our Association, writes:

The meeting was a splendid success. Everyone was benefited and the attendance was good. I attended the opening meeting of the Buchanan County Medical Society at St. Joseph where I talked about the aims of the Association and dwelt particularly on the postgraduate plan. I expect to attend the postgraduate meeting of the Twenty-Eighth District at Springfield.

It will be noted that about 40 per cent. of the members in the district attended the meeting and that the enthusiasm aroused was a convincing index of the profit which the members, both those who lecture and those who listen, may expect to gain from this innovation. Elsewhere in this issue we give the programs, names of lecturers, and place of other meetings now scheduled.

## OTHER POSTGRADUATE MEETINGS

In addition to the postgraduate meeting held at Excelsior Springs, reported in the foregoing comment, we have four other meetings scheduled. Three of these will convene in October but the reports cannot be received in time to present them in this issue of *THE JOURNAL*. The other is scheduled for November. We believe the members will be interested in knowing what the Council has done in preparing these programs and of the willing response of members of the Association to deliver lectures as was done at Excelsior Springs, and therefore we publish the programs for the other postgraduate meetings, as follows:

### DISTRICT 10

Councilor, D. A. Barnhart, Huntsville.

Counties: Macon, Randolph, Monroe, with Howard and Chariton counties invited. Meeting at Moberly, Thursday, October 23, 1 to 10 p. m.

#### PROGRAM

*Symposium on Influenza.*

Symptoms and Treatment, Dr. O. H. Campbell, St. Louis.

Phthorax, Endocarditis, and Other Complications, Dr. A. E. Taussig, St. Louis.

Complications in Upper Air Passages, Dr. S. B. Westlake, St. Louis.

Bacteriology of Influenza and Complications, Dr. M. S. Fleisher, St. Louis.

### DISTRICT 22

Councilor, H. L. Reid, Charleston.

Counties: Cape Girardeau, Madison, Mississippi, Bollinger, with Twenty-First, Twenty-Third, Twenty-

Fourth, Twenty-Fifth Districts invited. Meeting at Cape Girardeau, Wednesday, October 22, 9 a. m. to 5 p. m., in conjunction with Southeast Missouri Medical Society.

#### PROGRAM

Relation of Diagnosis to Treatment of Heart Diseases, Dr. G. Canby Robinson, St. Louis.

Clinic on Skin Diseases, Dr. Joseph Grindon, St. Louis.

Recent Advances in Diagnosis Genito-Urinary Conditions, with lantern slides, Dr. J. R. Caulk, St. Louis.

Acute Surgical Abdomen, Dr. R. E. Schlueter, St. Louis.

Medical Organization, Dr. A. H. Hamel, St. Louis.

Team Work, Dr. E. J. Goodwin, St. Louis.

### DISTRICT 26

Councilor, W. H. Breuer, St. James.

Counties: Crawford, Dent, Laclede, Phelps, Pulaski, Franklin, Gasconade and Maries counties invited. Meeting at Rolla, Tuesday, November 11, 2 to 10 p. m.

#### PROGRAM

Diseases of the Ductless Glands, with lantern slides, Dr. William Engelbach, St. Louis.

Modern Wound Treatment, Dr. J. C. Morfit, St. Louis.

Mental Hygiene and Neurology, Dr. M. A. Bliss, St. Louis.

Cancer of Head and Face, with lantern slides, Dr. M. F. Engman, St. Louis.

Prostatic Diseases, Dr. C. E. Burford, St. Louis.

Medical Organization, Dr. A. H. Hamel, St. Louis.

### DISTRICT 28

Councilor, A. L. Anderson, Springfield.

Counties: Greene, Lawrence, Barry, Stone, Christian, Webster, Polk, Taney, Dallas, with Twenty-Seventh and Twenty-Ninth Districts invited. Meeting at Springfield, Thursday, October 23, 8 p. m., in conjunction with Southwest Missouri Medical Society.

#### PROGRAM

Diagnosis and Treatment of Empyema, Dr. W. T. Coughlin, St. Louis.

Ulcers of the Cornea, Dr. W. E. Shahan, St. Louis.

Diagnostic Value of Certain Signs in Important Medical Problems, Dr. L. Sale, St. Louis.

Importance of Postgraduate Meetings, Dr. N. P. Wood, Independence, President Missouri State Medical Association.

Dr. E. H. Skinner, Kansas City, is also on the program for Southwest Missouri Medical Society.

## THE MENTAL HYGIENE SURVEY IS BEGUN

In these columns *THE JOURNAL* has commented frequently on one or another phase of the mental hygiene movement as referable to Missouri. We have called attention to the necessity of a survey in order that the facts may be available on which may be based an intelligent and successful attempt to better the condition of the insane and feeble-minded in this state. What a survey is was outlined in an earlier number of *THE JOURNAL*. Governor Gardner has requested the National Committee

for Mental Hygiene to make the survey and now we have the pleasure of informing our members and the profession that the survey has begun.

Since the matter of the study of the care of mental diseases in the state of Missouri was first brought up the National Committee for Mental Hygiene has made every effort to secure the services of the most competent psychiatrist available to carry on the survey. Finally the services of Dr. Samuel W. Hamilton were secured and he has arrived in Missouri to begin the work. Dr. Hamilton served for eleven years in two public institutions for the insane in New York State, made a similar survey of the state of Colorado, and for two years was a neuropsychiatric consultant in the army. His function is to gather all available information about the care of the insane in this state and make it accessible for the governor in order that the policies of the state may be based on ascertained fact. Dr. Hamilton will take up the entire question of dealing with mental diseases in every phase, their care not only in special state institutions but by counties and other communities, methods of commitment and care pending commitment, methods of discharge and parole and care after discharge, the care of the criminal insane, the relation of mental diseases to important social questions, and the possibility of establishing facilities for research and for training those who have to carry on their work elsewhere. It will be necessary for him to visit all parts of the state and either himself or with the aid of assistants examine the inmates of almshouses, county jails, and other places where persons suffering from mental diseases are apt to be found.

As has been pointed out before, this whole problem is primarily medical. It is an opportunity for the profession to cooperate in one of the largest sociomedical works we have attempted in this state. As Dr. Hamilton goes about the state he will meet many members of our Association whose hearty good will and valuable cooperation we earnestly bespeak.

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#### PREVENTION OF BLINDNESS IN MISSOURI

At a meeting of the Ophthalmic Conference at St. Louis, October 14, Major L. P. H. Bahrenburg, Surgeon, and Major J. W. Kerr, Assistant Surgeon-General of the United States Public Health Service, gave an account of the work

at Ellis Island and also at Galveston in the isolation and treatment of trachoma among immigrants.

It was the consensus of opinion of the ophthalmologists that trachoma was increasing in Missouri and that radical measures should be taken to stamp out this dread disease before it takes further toll of sight among our people.

Through the activities of the Missouri State Medical Association, the Missouri Commission for the Blind, the State Board of Health, the Children's Code Commission, and other health agencies, the people have been warned in a measurable degree of the dangers of this sight destroying affliction, but in spite of these efforts trachoma continues to be one of the most serious dangers to public health.

The need for a survey of the counties of the state is rapidly increasing in order to ascertain where trachoma is most prevalent and then request the Surgeon-General of the Public Health Service to assign men who are experienced in this work in the crusades in the mountains of Kentucky and Tennessee to give clinics and establish free treatment for all cases in Missouri. Such a movement will necessitate the cooperation of the county societies with the health agencies that are willing to give the time and share the expense of compiling this information and to follow up the treatment of the specialists who will conduct the clinics.

The Missouri Tuberculosis Association has begun a health survey of the school children in some counties and has received valuable aid from the volunteers among the medical men. If a survey of eye diseases especially trachoma is to be accurate and therefore of any value, it will be necessary to have a differential diagnosis made by experts who are able to distinguish between chronic or follicular conjunctivitis (too frequently called "granular lids") and real trachoma.

The great expense of the blind to the state or to his community would warrant some expenditure by the state and county authorities in order to prevent blindness, but the medical profession willingly bears the brunt of investigating the conditions and making the necessary impression on the people to show the need of ardent and patient work in curing existing cases of eye disease when possible and prevent future trouble.

In the survey by the tuberculosis association the problem of how much harm a given amount of ametropia will cause in a certain child will



be difficult to solve by the ordinary investigator even though he is a medical man and therefore such questions should be referred to the nearest specialist in eye diseases, not to the town optician or optometrist.

The ideal method of completing a survey of this kind would be to employ young, well-trained specialists who are capable of making an exhaustive examination when needed, but for the present we must be content with the knowledge furnished by our present economical but incomplete methods.

Our committee on blindness is anxious to further the proposition of inviting the assistance of the United States Public Health Service to make a trachoma survey of Missouri and will appeal to the county societies for their assistance in gathering data on the actual number of cases in private practice and in public institutions in each county. The cooperation of every member is earnestly solicited in this great work for it will give the committee the knowledge essential to an intelligent beginning of a campaign against the disease. The committee is composed of the following members; communications may be addressed to the chairman or to the nearest member of the committee: Dr. J. W. Charles, Chairman, Humboldt Building, St. Louis; Dr. R. J. Curdy, Rialto Building, Kansas City; Dr. J. B. McCubbin, Fulton; Dr. William Spaulding, Poplar Bluff; Dr. M. C. Shelton, Joplin; Dr. Guy Titsworth, Sedalia.

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#### CHANGES IN THE FACULTY OF WASHINGTON UNIVERSITY MEDICAL SCHOOL

A notable addition to the Washington University Medical School was announced in these columns when the school received \$300,000 to endow the department of pharmacology. The General Board of Education gave one-half of the sum and the school raised the balance. For the head of this department the school has engaged Dr. Eli Kennerly Marshall, Jr., well known in scientific circles for his work in pharmacology and associate professor of pharmacology in Johns Hopkins University. For more than two years he has served the government as chief of the service investigating pharmacologic problems in the gas service with headquarters at Washington. He has just been released from that work and comes to St. Louis to assume his duties at the medical school.

Another important addition to the faculty is the confirmation of the appointment of Dr.

Evarts Graham professor of surgery, whose appointment we mentioned recently. At the time of his appointment Dr. Graham was prevented from taking charge of the department of surgery because the War Department required all his time at Washington. His recent release by the government enables him to take charge of his department at the medical school.

Several promotions are announced, notably, Dr. Ernest Sachs, Professor of Clinical Neurological Surgery, who was in charge of this service during the war. Dr. Leland Barton Alford has been promoted to Associate in Clinical Neurology, Dr. Drew W. Luten and Dr. William Harwood Olmstead to instructors in clinical medicine. In addition to these changes the following appointments have been made:

Mr. A. W. L. Bray, Associate in Anatomy; Dr. Alfred Conrad Kolls, Associate in Pharmacology; Mr. Edgar Allen, Instructor in Anatomy; Dr. Edward Adelbert Doisy, Instructor in Biological Chemistry; Dr. Frederick Eberson, Assistant in Dermatology; Dr. Arthur Strauss, Assistant in Clinical Medicine; Dr. L. S. Luton, Assistant in Clinical Medicine; Dr. Isaac D. Kelley, Assistant in Clinical Otology; Dr. F. O. Schwartz, Assistant in Clinical Ophthalmology; Dr. H. D. Lamb, Assistant in Clinical Ophthalmology; Dr. M. Hayward Post, Assistant in Clinical Ophthalmology; Dr. Lawrence Post, Assistant in Clinical Ophthalmology.

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#### DRIVEL

*The Journal of the American Medical Association* for October 18 contains an exposé of the William A. Webster Company of Memphis, Tenn., and the Direct Sales Pharmaceutical Company of St. Louis, who are quoting low prices on certain medicinal articles. It is a typical campaign of the old-style proprietary medicine business, now happily in its decline since the state journals and several privately owned medical journals refuse to advertise untrustworthy products. The Direct Sales Pharmaceutical Company seems to be merely a selling agency for the Webster Company, all orders for the preparations being filled through the Memphis concern. The account in *The Journal of the American Medical Association* instances numerous convictions against the Webster Company by the federal government for misbranding and adulteration and also reproduced a testimonial that is a gem of humbuggery humbugging the humbug. For the benefit of those

members who did not see the article in our national publication we have borrowed the reproduction for our columns. It follows:

F W P BUTLER, M D  
COLUMBIA S C

Sept 19th, 1919.

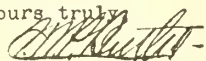
The Wm. A. Webster Company,  
Memphis, Tenn.

Gentlemen:

It is useless to treat maralia unless the system is fertilized or put in a receptive condition for the effect of the antidote for malaria so prevalent in this country. The human system is a good deal like land to be cultivated. If the land is not put in a proper condition the seed will not germinate effectively

In your product you have an ingredient to agitate the proper flow of bile, and cause the liver, the great sugar and disinfectant mill of the human system to functionate normally. Therefore, giving quinine from any other condition is like pouring water on a duck's back.

I have begun the use of your Ferritonic-Woods' and only wish it was in my power to make every doctor in North and South Carolina do likewise.

Yours, truly,  


Reproduction (reduced) of a testimonial letter sent to physicians by William A. Webster Company of Memphis, Tenn. Those who operate this concern also have a sales agency in St. Louis, Mo., known as the Direct Pharmaceutical Co.—Courtesy Jour. A. M. A.

## ST. LOUIS OPEN AIR SCHOOLS

The Board of Education of St. Louis has issued a circular letter to the physicians in that city directing attention to the rules and regulations governing the admission of pupils to the open air schools with the view of engaging the cooperation of the medical profession in directing proper cases to the schools and eliminating those not acceptable. Children who are physically below par and come from a tuberculous environment and those who have been actively tuberculous but have reached an arrested stage are accepted for admission to the open air schools. They must, however, be in one of the first eight grades of school work. If after admission to the open air school a pupil should become actively tuberculous he is at once taken away from the school and becomes a hospital case, for which class of cases the board main-

tains a school at Koch Hospital. The board does not admit deformed children, serious heart cases, incorrigibles, mental defectives, nor truants.

## DENTAL RESEARCH

*The Journal of Dental Research* is a recent expansion of literature devoted to stomatology which takes the place of the *Journal of the Allied Dental Societies*. It is financed as a university undertaking by the College of Physicians and Surgeons of New York and contains on its editorial staff some seventy practitioners and investigators in the dental, medical and allied professions. The first number was issued in March and quarterly productions are contemplated for the present. It is a splendid publication corresponding with our journals of medical research and deserves the support and encouragement of all who are interested in the advancement of medical science. The subscription price is \$5 per annum. Communications should be addressed to the Journal of Dental Research, College of Physicians and Surgeons, 437 West Fifty-Ninth Street, New York City.

## OBITUARY

JOHN HARRIS DUNCAN, M.D.

Dr. Duncan died at his residence in St. Louis on June 22, 1919.

He was born Aug. 16, 1852, at Columbia, Mo. There and at William Jewell College he obtained his preliminary education. From the latter he received his master's degree in 1872. By the same institution he was honored with a LL.D in 1904.

He received the M.D. degree from the Missouri State University in 1874, and also from Bellevue Hospital Medical College, New York, in 1875, and began the general practice of medicine in Columbia. In 1881 he was married to Miss Susan Isabelle Dulany of Hannibal, Mo., who survives him.

From 1883 to 1893 his residence was in Kansas City, Mo., where he was engaged in dermatologic practice, and occupied the chair of dermatology and of physiology in the University Medical College. Since 1893 Dr. Duncan resided in St. Louis.

From 1893 to 1897 he was a member of the faculty of The College of Physicians and Surgeons. From 1900 to 1907 he was professor of dermatology in the Marion-Sims-Beaumont School of Medicine.



He was a member of the St. Louis Medical Society, the Missouri State Medical Association, and of the American Medical Association. In 1895 he was elected president of the Missouri State Medical Association.

These data indicate the activities of Dr. Duncan's professional life. Many of us who had the fortunate privilege know how thoroughly and graciously he accomplished tasks of this kind. To be so generally and highly esteemed as he was among his co-workers is the lot of very few men. Practical service in the line of his profession was unquestionably the gauge by which he regulated his life's work; all who habitually came in contact with him were ever aware of the fact. Than this no higher tribute can be written to the memory of mortal man.—*Bull. St. Louis Med. Society.*

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## NEWS NOTES

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TWO classes for women voters have been arranged in St. Louis. Better make them co-eds.

DR. CARDINAL B. WOOLSEY, Braymer, is completing a new building for the Woolsey Hospital.

A CONVENTION of women physicians in New York went up in smoke when the advocates of women smoking bolted the meeting.

THE St. Louis Medical Society and the St. Louis Pediatric Society have invited the American Child Hygiene Association to hold its 1920 meeting in St. Louis.

DR. M. C. McMURRY of Paris has lost his appendix. He spent some time in Woodland Hospital at Moberly, where he left the troublesome organ and now feels better.

THE fall meeting of the Southwest Missouri Medical Society held its session at Springfield, October 23 and 24, under the presidency of S. W. Cassville. A postgraduate meeting was held on October 22.

DR. F. M. POTTENGER of Monrovia, Calif., President of the Mississippi Valley Medical Association, was a visitor in St. Louis, October 15, while on his way to the annual session of the Association at Louisville.

THE forty-third semi-annual meeting of the Southeast Missouri Medical Association met at Cape Girardeau, October 21-23. Dr. F. B. Hall of St. Louis is president of the Association. A postgraduate meeting was held on October 23.

OFFICERS of the State Board of Health believe that an outbreak of typhoid in Concordia, Sweet Springs, and other towns in that vicinity, resulted from the use of ice taken from ponds that had been contaminated by neighboring cess pools.

THE Missouri Commission for the Blind want the names of oculists who are willing to give some of their time to lecturing on the prevention of blindness. See communication from the commission in the correspondence columns of this issue.

A \$10,000 SUIT for malpractice against one of our members in Webb City was won by the physician when the court instructed the jury to return a verdict for the defendant on the ground that the plaintiff had produced no evidence to justify the suit.

THE Missouri Tuberculosis Association announces the appointment of Mrs. Emily Newell Blair as director of the newspaper publicity service of the association and editor of a monthly magazine to be called *Fairplay*, which the association purposes establishing early in 1920.

DR. RALPH MAJOR of Kansas City, professor of pathology and bacteriology in the University of Kansas School of Medicine, has accepted a position on the staff of the Henry Ford Hospital at Detroit. This hospital was under government control during the war and has only recently been released to the owners.

OUR Committee on Blindness desires information on the number of trachoma cases in the state as preliminary to a survey of the state by the United States Public Health Service. Members who can assist in this important work should communicate with the committee who have presented their appeal in the editorial columns in this issue.

TEN per cent. of all prisoners arrested in St. Louis are feeble-minded, according to Dr. J. E. Wallen, chief of the Public School Clinic of St. Louis. He says 649 pupils in the public schools have been found feeble-minded and 532

mentally deficient. He advocates increasing the amount for a municipal farm from \$900,000 to \$1,500,000 to be included in the proposed \$22,000,000 bond issue.

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DR. VICTOR C. VAUGHAN of Ann Arbor, Mich., was a prominent figure at the sessions of the Military Surgeons in October. He was entertained by Dr. C. V. Mosby at a dinner to which a number of St. Louis physicians were invited. Dr. Vaughan's visits to his native state are not as frequent as we could desire but every member of the Association takes delight in honoring him when opportunity offers.

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DURING the meeting of the Military Surgeons at St. Louis, October 15, the St. Louis Medical Society had the privilege of hearing Dr. William F. Snow, Lieutenant-Colonel, Medical Corps, U. S. Army, and Dr. R. L. Russell, Director of Venereal Diseases of the Missouri State Board of Health. The society gave the entire evening of their regular meeting to these gentlemen, who presented the plans of the government for controlling venereal diseases.

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DR. H. S. HILL of Springfield has presented his medical library to the Greene County Medical Society. After a half century of active practice Dr. Hill, who is 76 years old, feels that he is entitled to slacken his pace somewhat and therefore will not need all the books he has accumulated. This is the second donation of medical works received by the Greene County Medical Society, the late Dr. H. L. Porter of Seneca having directed that his medical library be given to that society.

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A DIVISION OF VENEREAL DISEASES has been established by state board of health and placed under the direction of Dr. R. L. Russell, who has had much experience in this work. He will shortly begin a campaign against venereal diseases and visit many communities throughout the state to organize clinics and direct effectual measures to combat the venereal disease menace. The cooperation of the medical profession is earnestly desired in prosecuting this fight to improve the health of the people.

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MAJOR H. D. GILLIES of the British Medical Corps was the guest of the Surgeons Club of St. Louis and the St. Louis Dental Society October 17 and spoke of the work done in plastic surgery in treating wounds of the face during the great war. The lecture was illustrated with

lantern slides showing the operations and methods of treating the injuries. He was in charge of one of the largest reconstruction hospitals in the British Army. He said many of the advances in plastic surgery were the outgrowth of work done by American surgeons.

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BENTON COUNTY MEDICAL SOCIETY has set a record for society activity unapproached by any other society in the past. On September 12 the Benton County Medical Society held a meeting and elected officers for the balance of this year and to hold over during 1920. The energetic secretary, Dr. J. R. Smith of Warsaw, had taken time by the forelock and collected the dues of all members for 1920 and has remitted the state assessment for them. Like most of the other county societies the meetings in Benton County were interrupted and the society work disturbed during the war but the members have now settled down to earnest and systematic regularity of conducting society affairs.

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WALTER REED POST No. 136 of the American Legion composed largely of members of the medical and dental professions was organized at St. Louis October 3. The officers are: Drs. Fred W. Bailey, Post Commander; W. T. Coughlin, vice post commander; J. F. Hardesty, adjutant; C. P. Dyer, finance officer. Drs. M. G. Seelig and J. P. Harper were elected delegates to the state convention. The name of the post was adopted in honor of Major Walter Reed who was chief of the yellow fever commission in 1900 and died in 1902 from the effects of the disease contracted from the bite of a mosquito in proving the mosquito theory of transmission. The name is a temporary designation and may be changed.

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THE bill passed at the last session of the legislature to license chiropodists went into effect on October 1. All chiropodists will be required to obtain a license from the State Board of Health. Those who have practiced for more than one year may obtain the license on the payment of \$25, while those who have practiced less than a year will be required to pass an examination. The law defines chiropody as follows:

The treatment for hire or reward of abnormal nails, superficial excrescences of the skin not involving the subdermal tissues occurring on the feet, including corns, warts, callosities and bunions, but not including the treatment of injuries to or congenital or acquired deformities of the feet or conditions requiring the use of anesthetics or incisions involving the structure below the level of the true skin.



THE higher standards required for entrance in the medical schools of the St. Louis and Washington universities seem not to have affected materially the number of matriculants, but it surely must be a concomitant that the entrants under the new restrictions possess superior mental and moral qualifications for intelligent and ethical practice. The classes at the St. Louis University Medical School consist of: First year premedical 23, second year 47, freshmen 60, sophomores 36, juniors 87, seniors 63; total enrolment 316. At Washington University the medical classes have the following enrolment: First year premedical 90, second year 42, freshmen 44, sophomores 35, juniors 41, seniors 46; total 298. There are four women in the Washington University medical classes, this course having recently opened to women. The St. Louis University does not accept women in the medical school.

THE thirteenth annual meeting of the Southern Medical Association will convene November 10 to 13 at Asheville, N. C., "the land of the sky." The program for the scientific work has not been prepared at this writing but a bulletin announces many interesting and entertaining events in preparation for the comfort and pleasure of those fortunate ones who attend the session.

Dr. Lewellys F. Barker of Baltimore, who is President of the Association this year, has put forth special efforts to make this session a notable success, and Dr. Seale Harris, the Secretary, has been released from active service in the Medical Department of the Army in time to give his personal push to the preparations. Dr. Harris is editor of the *Southern Medical Journal*, which is the official organ of the Association and one of the privately owned medical journals that steadfastly adhere to the fight for pure advertising. Missouri is included in the eleven Southern States comprising the Association and is well represented in the membership. Only members of our Association however can become members of the Southern Medical Association.

As a result of the questionnaire sent out by the Missouri Officers Association, both a state organization and a St. Louis chapter of commissioned officers have been organized with headquarters at St. Louis. The state organization will necessarily be a tentative one until enough chapters have organized in the state to make it possible to have a meeting of all the men in Missouri. Wherever there are ten or

more officers a local chapter can be started. Kansas City, Joplin, St. Joseph, Springfield, Jefferson City and Sedalia are organizing. The St. Louis Chapter started with the following as its first members: Col. J. H. Parker, Col. Frank M. Rumbold, Maj. W. H. Luedde, Col. H. W. Loeb, Col. F. W. Green, Com. E. A. Brooks, Maj. S. W. Goodwin, Maj. Wilson Burden, Col. Wilbur Willing, Col. S. Nic D. Townsend, Capt. W. L. Crobbe, Capt. E. W. Rucker, Jr., Maj. W. F. Sigmund, Col. F. G. Jonah. Through this organization will be perpetuated the recognition of the splendid services rendered by the American officers and men. In a social way the friendship begun in training camp and on the battlefield will be maintained. All officers who have registered with the Missouri Officers Association will become ipso facto charter members. They are urged to get together and organize in order that a state convention can be called at the earliest date possible. For further information those interested are cordially invited to communicate with Virginia M. Harriss, secretary, 304 Rialto Building, St. Louis.

## MEMBERSHIP CHANGES, OCTOBER

### NEW MEMBERS

Anderson, Hans, Bloomsdale.  
 Arenson, Harvey L., Moberly.  
 Ashley, Hugh V., Bloomsfield.  
 Block, Jacob, Kansas City.  
 Brickey, P. A., Boonville.  
 Brown, C. Walter, Jr., Campbell.  
 Evans, Harry T., Mt. Vernon.  
 Fowler, Kenneth, St. Louis.  
 Heuston, Howard H., St. Louis.  
 Kuhn, Henry J., St. Louis.  
 Lewis, C. E., Advance.  
 Lynch, L. A., Kansas City.  
 McGrew, Wm. Hastin, Norborne.  
 McMurtry, Alex. T., Salem.  
 Margulis, Abraham A., St. Louis.  
 Matlock, Wallace L., Caruth.  
 Mulvany, Alva B., Kansas City.  
 Nesbit, Wellwood M., St. Louis.  
 Pieper, Henry G., St. Louis.  
 Stokes, James B., St. Louis.  
 Swanson, John T., Kansas City.  
 Upshaw, Ira W., St. Louis.

### CHANGES OF ADDRESS

Alt, Adolf, 316 Metropolitan Bldg., St. Louis, to 5614 Waterman.  
 Armstrong, C. L., Clinton, to Boise, Idaho.  
 Babcock, Bert W., Lamont, Mich., to 2136 St. Louis Ave., St. Louis.

Baerens, Oscar F., 303 Commercial Bldg., St. Louis, to 214 N. 6th.

Barnes, Percival C., 6188 Delmar Ave., St. Louis, to 6312 Washington Ave.

Beard, F. G., Maitland, to 920 Edmond, St. Joseph.

Bedal, A. C., 4132 Castelman Ave., St. Louis, to 5098 Washington Ave.

Black, James M., 5003 Delmar Blvd., St. Louis, to Carrollton, Ill.

Bohrer, Harry C., St. Louis Baptist Hosp., St. Louis, to Univ. Club Bldg.

Bosse, Edwin H., 1023 N. Grand Ave., St. Louis, to Univ. Club Bldg.

Burnett, S. G., 713 Lathrop Bldg., Kansas City, to 315 E. Tenth St.

Caulk, J. R., 301 Humboldt Bldg., St. Louis, to Univ. Club Bldg.

Cavaness, E. W., Lathrop Bldg., Kansas City, to 1010 Rialto Bldg.

Chaffin, Elizabeth B., Nevada, Ia., to % Woman's Hosp., 2137 N. College Ave., Philadelphia, Pa.

Clapper, Wm. L., 4953 McPherson, St. Louis, to 5321 Savoy Court.

Cleveland, A. H., 2612 S. Grand Ave., St. Louis, to 1504 S. Grand.

Coughlin, Wm. T., 403 Metropolitan Bldg., St. Louis, to Univ. Club Bldg.

Davie, Joseph, 600 Century Bldg., St. Louis, to Hodiamont and Easton.

Edmondson, M. T., 200 E. Commercial St., Springfield, to Fair Grove.

Elliott, John R., Clarksdale, to 451 N. 17th St., St. Joseph.

Engelmann, Oscar R., 2752 Chippewa St., St. Louis, to Chippewa and Jefferson.

Fisher, R. F., 400 Metropolitan Bldg., St. Louis, to Wausau, Wis.

Florian, A. J., 220 Chambers Bldg., Kansas City, to 315 E. 10th.

Flynn, George W., Nichols Bldg., St. Louis, to 3636 Flora Blvd.

Garlitz, A. W., Danville, Ill., to 1776 Lake Ave., Wilmette, Ill.

Gordon, Frank N., 4552 McMillan, St. Louis, to 116 Woodlief Ave., San Antonio, Tex.

Graul, Robt. E., 2905 Cherokee St., St. Louis, to 3102 S. Grand Ave.

Hamlin, Joseph R., LaGrange, to 5255 Page Blvd., St. Louis.

Hardesty, John F., Winfield, to 311 Metropolitan Bldg., St. Louis.

Haynes, Frank W., 202 Paulian Bldg., St. Louis, to 401 Lister Bldg.

Hibbard, Sherman B., Westover Bldg., Kansas City, to Rialto Bldg.

Hirschi, Wm. T., 2306 St. Louis Ave., St. Louis, to 3500 N. Grand Ave.

Hochdoerfer, Daniel F., 3100 S. Grand Ave., St. Louis, to 3055a Arsenal.

Holbrook, Ralph W., 415 Argyle Bldg., Kansas City, to 810 Lathrop.

Holt, A. T., Tusculum, Tenn., to Tusculum Rural Station, Greeneville, Tenn.

Holt, Jessie B., Dunlap, to Tusculum Rural Station, Greeneville, Tenn.

Hughes, Marc. R., 232 Metropolitan Bldg., St. Louis, to 3546 Washington Ave.

Hummel, Louis G., 400 W. Commercial St., Springfield, to Witty.

Jost, Wm. E., 1323a Franklin Ave., St. Louis, to 617 Century Bldg.

Kirchner, W. C. G., from 4931 McPherson Ave., St. Louis, to 228 Metropolitan Bldg.

Kramolowsky, H. H., 5639 Julian Ave., St. Louis, to 958 Arcade Bldg.

James, Hiram J., Ava, to Rippee.

Ladd, Fred H., 3106 Jule St., St. Joseph, to Corby-Forsee Bldg.

Larew, John T., 5095 Cates Ave., St. Louis, to Univ. Club Bldg.

Leighton, W. E., from 208 Humboldt Bldg., St. Louis, to 305 Lister Bldg.

Lewald, James, City Sanitarium, St. Louis, to 3129a Wyoming.

Lipsitz, Samuel T., 333 Metropolitan Bldg., St. Louis, to Univ. Club Bldg.

Love, W. S., Bertrand, to Charleston.

Lynch, John C., 501 Chambers Bldg., Kansas City, to 100-101 Essex Bldg., 1332 Grand Ave.

McGann, P. J., Augusta, to Columbus.

McNees, A. J., Clinton, to Wichita Falls, Texas.

McRaven, Cyrus P., 624 Merriwether St., Cape Girardeau, to Old Appleton.

Markwort, Herbert, 4109 Juniata Ave., St. Louis, to 1657 S. Grand Ave.

Marriott, W. McKim, 500 S. Kingshighway, St. Louis, to 4943 Laclede Ave.

Menkhaus, John B., 4607 Easton Ave., St. Louis, to 4575 Page Ave.

Miller, Walter McN., 1013 Fullerton Bldg., St. Louis, to 706 Pontiac Bldg.

Myer, Max W., Columbia, to 625 Univ. Club Bldg., St. Louis.

Parman, David R., 4503 Page Blvd., St. Louis to Wall Bldg.

Perrings, Fred S., 3rd Nat'l Bank Bldg., St. Louis, to 3458 Connecticut.



Powell, Carl A., 1400 N. Grand Ave., St. Louis, to 928 N. Grand Ave.

Punton, John, 1329 Linwood, Kansas City, to St. Regis Hotel.

Ralls, L. B., Centerville, to Ellington.

Rawhauser, J. L., Greenfield, to Willows, Calif.

Redington, J. C., Jewish Hospital, St. Louis, to Galesburg, Ill.

Rehfeldt, Charles S., 2302 S. Jefferson Ave., St. Louis, to 3534 Shenandoah.

Remley, George C., 2628 Canal St., New Orleans, La., to 1145 Prospect Ave., Kansas City.

Ring, Frank, 619 Chemical Bldg., St. Louis, to 609 Chemical Bldg.

Rogers, Ford B., 402 Argyle Bldg., Kansas City, to St. Luke's Hosp.

Rotter, Julius C., 3123 Lemp St., St. Louis, to 3249 Jefferson.

Sandperl, Harry, 424 Delmar Bldg., St. Louis, to 519 Univ. Club Bldg.

Schwarz, Otto H., 4947 Laclede Ave., St. Louis, to Univ. Club Bldg.

Sevin, Omar R., 5086 Westminster Pl., St. Louis, to 509 Schweiter Bldg., Wichita, Kans.

Shaw, F. W., 3124 Tracy Ave., Kansas City, to Box 784, Rolla.

Sheahan, Edwin L., 858 Hamilton Ave., St. Louis, to Humboldt Bldg.

Simrell, Harry A., Caplinger Mills, to Stockton.

Spain, Kate C., 5338 Page Blvd., St. Louis, to 5114 Page Blvd.

Stone, Chas. A., 2230 E. College, St. Louis, to 400 Metropolitan Bldg.

Stone, Edna M., Grand and Washington Aves., St. Louis, to 3833 Washington Ave.

Tidwell, G. W., Sedalia, to Elvins.

Tierney, John L., Humboldt Bldg., St. Louis, to 932 Univ. Club Bldg.

Tuholske, Lister, 4515 Pershing Ave., St. Louis, to 453 N. Taylor Ave.

Van Raalte, Martin, 1730 Franklin Ave., St. Louis, to 214 Railway Exchange Bldg.

Weiss, Wm., 3661 Lafayette, St. Louis, to 3010 S. Grand Ave.

Wilhelmi, Otto J., 412 Humboldt Bldg., St. Louis, to University Club Bldg.

Williams, J. E., Bourbon, to 321 Clark Ave., Webster Groves.

Witter, Wm. L., Milan, to Room 206, 547 West Jackson Blvd., Chicago, Ill.

Zeinert, O. B., 501 Humboldt Bldg., St. Louis, to 618 Univ. Club Bldg.

#### REINSTATED

Guffey, Don Carlos, Jackson.

Miller, Walter McN., St. Louis.

#### TRANSFERRED

Ford, H. W., Tulsa, Okla., from Montgomery County Medical Society to Tulsa County (Okla.) Medical Society.

Hendrix, M. B., Memphis, Tenn., from Pemiscot County Medical Society to Shelby County (Tenn.) Medical Society.

#### DROPPED

Brown, J. R., Malta Bend.

Jackson, J. D., Kansas City.

#### RESIGNED

Scott, T. P., Carlisle, Ky.

#### DECEASED

Trimble, J. W., Chillicothe.

## CORRESPONDENCE

### AN APPEAL FOR HUMAN EMBRYOLOGICAL MATERIAL

ST. LOUIS, Oct. 20, 1919.

*To the Editor:*—In 1906 I observed certain malformations of the human shoulder-blade, and in contributions to current literature I have given them the collective name, "the scaphoid type of scapula," and pointed out some of its hereditary, clinical and anatomical significance.

Probably the most important observation connected with this type of scapula in man is its age incidence, that is to say, it occurs with great frequency among the young and with relative infrequency among the old. There appear to be two possible explanations of this fact, either (a) one form of shoulder-blade changes into the other during development and growth, or (b) many of the possessors of the scaphoid type of scapula are the poorly adaptable, the peculiarly vulnerable, the unduly disease susceptible—the inherently weakened of the race.

I have attempted to answer these questions by seeking evidence in various directions and one of the most important of these has been a study of intrauterine development of shoulder-blades. My investigations in this direction have been limited by the material at my disposal, which has been inadequate for a definite solution of this phase of the problem. I am therefore appealing to physicians for human fetuses in any and all stages of development.

It is desired that the material, as soon as possible after delivery, be immersed in 10 per cent. formalin in a sealed container, and be

forwarded to my address charges collect. Due acknowledgment will be made to those forwarding material.

W. W. GRAVES, M.D.

727 Metropolitan Building.

## HELP PREVENT BLINDNESS

ST. LOUIS, MO., Oct. 18, 1919.

*To the Editor:*—Among the duties specified by the law creating the Missouri Commission for the Blind in 1915 are the following: "To prepare and maintain a complete register of the blind persons within this state and to collate information concerning their condition, cause of blindness, . . . to establish and maintain . . . shops and workrooms for the employment of blind persons, to adopt such measures as the commission may deem expedient for the prevention and cure of blindness."

The modest appropriation is scarcely enough to provide for the "shops and workrooms" yet the commission insists that prevention of blindness should be encouraged by every means at its command. In this work our greatest asset is the cheerful cooperation we have always received from the members of the Missouri State Medical Association.

As noted in my last letter,<sup>1</sup> conferences were held at Kansas City, St. Joseph, St. Louis, St. Charles, Cape Girardeau, Poplar Bluff, Springfield, Carthage and Joplin. The latter were addressed by Mr. Gordon L. Berry, Field Secretary of the National Committee for the Prevention of Blindness. Mr. Berry's effective talks last spring before the St. Louis Chamber of Commerce and at Hannibal, Kirksville, Jefferson City, Kansas City, and St. Joseph, are remembered with pleasure by those who were privileged to meet him.

Recently he put special stress on the sudden increase in blindness from wood alcohol poisoning and urged special legislation to prosecute and punish those who take advantage of the present "draught" to substitute this "poison" for the usual alcoholic stimulants. He reported that eighteen states now had laws establishing compulsory prophylaxis for the prevention of blindness from ophthalmia neonatorum, the benefits of which could easily be confirmed by statistical reports. The chairman of the Kansas Committee for the Prevention of Blindness, Dr. James W. May, reported very gratifying results from compulsory prophylaxis in Kansas at the meeting held at Kansas City, Mo., September 4, under the auspices of the Eye, Ear, Nose and Throat Club of that city.

To attain the objects of the Missouri commission in the prevention of blindness seems to require work along the following lines:

1. Educational.—Through the press, platform, and pulpit, people must be taught that fully one-half of all blindness is preventable and united efforts for that purpose must be encouraged. The commission has a large number of lantern slides illustrating various phases of this work and will be glad to loan them to any of your members who desire their use for this purpose. We shall be glad to have the names of physicians, especially oculists, who are willing to give talks to high schools and colleges at various points in the state during the ensuing year.

2. Legislative.—No plans for state legislation need be considered at present. Kansas City has protected its own future citizens by an ordinance providing compulsory prophylaxis secured through the combined efforts of the obstetricians and oculists under the leadership of Dr. George C. Mosher, so other cities need not wait for the next state legislature but act without delay to secure their own welfare.

3. In order to gather and disseminate information we should have a special committee in every county of the state similar to the county chapters of the Red Cross, whose assurance of cooperation we have from Dr. Pernoud, Medical Director of the Southwestern Division of the Red Cross. May we ask that your members assist in the formation of county committees and send us the names of persons especially interested in the welfare of the blind.

4. For the *prevention* and *cure* of blindness the special knowledge and skill of the trained ophthalmologist is absolutely indispensable. The Missouri commission desires to place a complete alphabetical list of reputable oculists in this state in the hands of every county chairman of our commission so that they may secure the best attention for a given case without delay. It is easy to enroll the names of oculists who are members of the American Ophthalmological Society or the American Academy of Ophthalmology and Oto-Laryngology or on the consulting staff of the Missouri Commission for the Blind, but it is believed that many ophthalmic practitioners who are not identified with any of these organizations should be appointed. The commission desires that all who are worthy shall be included but that admission shall be so closely guarded that it shall indeed be an honor to become enrolled on its ophthalmic staff. In this matter the active cooperation of your Committee on Prevention of Blindness constituted solely of ophthalmologists will be greatly appreciated.

5. Trachoma.—We have just requested Surgeon-General Blue, U. S. Public Health Service, to make a survey in regard to trachoma in one or more counties of Missouri. This was done following a suggestion by Assistant Surgeon-

1. See October, 1919, number.



General J. W. Kerr at a meeting of the St. Louis Ophthalmological Conference recently. May we ask that your committee indorse this action by sending a similar request? We shall be glad to have suggestions from your members as to which county most needs a survey on trachoma.

ANNA F. HARRIS, Secretary,  
Missouri Association for the Blind.  
326 Metropolitan Building.

[In another column\* our Committee on the Prevention of Blindness indorses the work of the Missouri Commission for the Blind and appeals to our members to aid in this forward movement. ED.]

## MISCELLANY

### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY AND NAVY

Annadown, P. V., Kansas City.  
Bellows, G. E., Kansas City; Bock, L. H., St. Louis;  
Boteler, G. M., St. Joseph; Braun, H. E., Independence; Bunch, J. R., St. Louis; Byrns, R. E., St. Louis.  
Campbell, C. S., St. Louis; Capell, C. S., Kansas City; Chattle, W. M., St. Louis; Clayton, P. B., Odessa; Cleveland, A. H., St. Louis; Corn, J. A., Amoret.  
Davis, W. D., St. Louis; Dennie, C. C., Kansas City.  
Earnest, C. E., Kansas City; Edwards, E. D., St. Louis; Elders, G. W., Hillsboro.  
Francisco, C. B., Kansas City.  
Gallagher, E. E., St. Louis; Gibbs, F. L., St. Louis; Glennon, Wm. P., St. Louis; Glynn, Robert, Springfield; Graham, E. A., St. Louis.  
Haynes, Frank W., St. Louis; Herchenroeder, Louis C., St. Louis; Hobson, A. D., St. Louis.  
Johnston, E. L., Waverly.  
Kieffer, Victor B., St. Louis; Kleinschmidt, C. C., St. Louis.  
Lewellen, C. P., Louisiana; Lilly, T. E., Kansas City; Look, H. H., Kansas City; Loutzenhiser, J. L., Ravanna; Luten, D., St. Louis (Navy).  
MacDonald, J. W., St. Louis; McRaven, C., Marston; Maddox, J., Moberly; Maxwell, H. S., Hopkins; Meyer, C. B., St. Louis; Muench, L. O., St. Louis.  
Nutz, J. F., Kansas City.  
O'Keefe, C. D., Hannibal; Ousley, J. W., Kansas City.  
Peden, J. C., St. Louis; Proctor, C. A., Doniphan.  
Schudde, O. N., Sullivan; Scott, C. D., St. Louis; Scrutshfield, G. E., Marshall; Shumaker, C. H., St. Louis; Small, W. L., Kansas City; Smith, G. W., Kansas City; Smith, M. N., Fayette; Stone, Chas. A., St. Louis; Stone, M. C., Springfield; Suggett, F. C., Ashland.  
Vessells, F. M., Perryville.  
Wagner, W. H., Berger; Wattenberg, J. E., Berger; Wohus, R. E., St. Louis; Woolley, P. V., Kansas City.  
Zeinert, O. B., St. Louis.

### ST. JOSEPH'S COMMUNITY WELFARE CENTER

The fruition of an idea long cherished has come in St. Joseph with the establishment of the community welfare center in Patee market house. This substantial and roomy structure, which has for some

time been regarded as a waste of money because the expectation that it would fill a want was not met, has been given over to a purpose for which it was not originally intended, but which will do great service to the community. When the city authorities erected the new Patee market house they "builted wiser than they knew."

The prime idea of a civic welfare board is that it systematizes and prevents the overlapping of charity and helps to decrease dependency and pauperism by acting as an agency through which those who feel the pinches of adversity may be aided in helping themselves. This purpose has been well served, indeed, since the creation of the St. Joseph welfare board. But there was another big idea here—namely, a center for the various philanthropies that operate in St. Joseph, so that there could be cooperation and coordination at a minimum of overhead expense and a maximum of results. It has required persistent and well directed effort and patience to bring this about, and the effort has been rewarded.

The Patee market house is being transformed into a service station of convenience and adequacy, and when it is completed there will be few institutions of its kind in the West to equal it. The arrangements were of such a character that they yielded to the necessary changes so easily that the transformation is being made at a comparatively trifling expense. Here will be quartered the welfare board, the medical laboratory of city board of health, the Red Cross, the Visiting Nurse Association, the Anti-Tuberculosis Society, the Associated Charities work room and the following clinics: Dental, baby welfare, gynecology, diseases of children, obstetrics, urology, rectal and venereal diseases, surgical and tuberculosis. There will be a central telephone and information booth, several convenient lobbies, a meeting room for directors of the various organizations, etc. All of this is on the first floor. The second and third floors will be used for storage, and the large hall will be used for lectures and community gatherings and dances, under the auspices of the welfare board. The expense of maintaining the quarters will be prorated among the various bodies that use the building.

This community welfare center is a most valuable acquisition to St. Joseph and places the city in the front rank of advanced municipalities. The various cooperating agencies are to be congratulated on this achievement, and it is due to Dr. Daniel Morton to say that through the many vicissitudes that have beset the welfare board he faithfully kept alive the oft-smoldering embers of the idea which has now brought fruit. The people of St. Joseph owe their heartiest support to the new community welfare center.  
—*St. Joseph (Mo.) News-Press.*

## SOCIETY PROCEEDINGS

### COUNTY SOCIETY HONOR ROLL, 1919 (UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Dec. 14, 1918.  
Webster County Medical Society, Dec. 23, 1918.  
Cedar County Medical Society, Dec. 30, 1918.  
Pike County Medical Society, Jan. 8, 1919.  
Vernon County Medical Society, Jan. 20, 1919.  
Chariton County Medical Society, Jan. 25, 1919.  
Wayne County Medical Society, Feb. 12, 1919.  
Camden County Medical Society, Feb. 14, 1919.  
Atchison County Medical Society, Feb. 26, 1919.  
Ralls County Medical Society, Feb. 27, 1919.

\* See page 385.

Ste. Genevieve County Medical Society, Feb. 27, 1919.

Nodaway County Medical Society, March 24, 1919.

Laclede County Medical Society, March 31, 1919.

Oregon County Medical Society, April 7, 1919.

Cass County Medical Society, April 16, 1919.

Adair County Medical Society, April 17, 1919.

Cape Girardeau County Medical Society, May 8, 1919.

Newton County Medical Society, May 12, 1919.

Carroll County Medical Society, July 2, 1919.

Greene County Medical Society, July 2, 1919.

Clay County Medical Society, July 8, 1919.

Johnson County Medical Society, Aug. 20, 1919.

Pettis County Medical Society, Aug. 25, 1919.

Dallas County Medical Society, Sept. 11, 1919.

Dent County Medical Society, Sept. 17, 1919.

Phelps County Medical Society, Oct. 2, 1919.

Barton County Medical Society, Oct. 11, 1919.

## BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held in the Commerce Club rooms at St. Joseph, September 17, the president, Dr. A. B. McGlothlan in the chair. Twenty-six members were present. The minutes of the previous meeting were read and approved.

The following applications received their first reading and were referred to the board of censors for investigation and report: Drs. W. A. Robinson, H. Brown, T. Lawrence Hawdon, E. Franklin Higdon.

The secretary was authorized to pay the State Medical Association dues for the members who are still in service.

A communication was read by Dr. W. J. McGill from the Rev. Mr. Wentworth, soliciting official indorsement of the Buchanan County Medical Society to a full page advertisement arranged by the promoters of the new Ensworth Hospital which they intended to run for one day in our daily papers. The subject was discussed and the indorsement authorized.

The scientific session consisted of a paper by Dr. E. S. Ballard on "Some of the Problems of Infant Feeding." This was discussed by Drs. Allaman and DeLamater.

The second paper was by Dr. W. L. Kenney on "Complications of Ear Infections Other Than Mastoid." This paper was discussed by Drs. Proud, Renaud, McGlothlan.

W. F. GOETZE, M.D., Secretary.

### Meeting of October 1

The regular meeting of the Buchanan County Medical Society was held at the Commerce Club Rooms, Oct. 1, 1919, with the president, Dr. A. B. McGlothlan, in the chair. Seventeen members were present. The minutes of the previous meeting were read and approved.

The following applications for membership received their second reading, were duly balloted on, and elected to membership: Drs. E. Franklin Higdon, Charles C. Coates, T. Laurence Howden, H. Brown, W. A. Robison.

The following motion introduced by Dr. P. I. Leonard was duly seconded, put to a vote and carried, and the Public Health and Legislative Committee instructed to carry out the provisions of the resolution:

*Resolved*, That this Society secure the services of an attorney for the purpose of investigating and prosecuting all unlicensed doctors and practitioners of medicine and surgery in our city and to pay the attorney \$25 for each conviction.

There being no further business before the society, the meeting adjourned.

F. F. GOETZE, M.D., Secretary.

## CARROLL COUNTY MEDICAL SOCIETY

The Carroll County Medical Society held a special meeting in the Courthouse at Carrollton, Wednesday, September 17, at 1:30 p. m.

The following were present: Drs. Richard F. Cook, Lynn Samuels, William M. McGrew, James A. Tonge, A. G. B. Brown, Edwin H. Musson, William G. Atwood, Ethan E. Brunner.

The object of the meeting was to cooperate with the United States Public Health Service in case of a recurrence of influenza in epidemic form. Drs. Arthur G. B. Brown of Bosworth and Lynn Samuels of Carrollton offered their services to the United States Public Health Service to be used in case of an emergency.

Influenza was discussed by all present and some very interesting cases reported.

The secretary was also told to inform the Councilor of this district that the physicians of this county are heartily in sympathy with the postgraduate meetings, and wish him to use his influence in arranging some meeting in his district.

Dr. Samuels reported several interesting typhoid fever cases. Typhoid cases were then reported by Dr. Musson of Norborne and Dr. A. G. B. Brown of Bosworth.

Dr. McGrew reported an interesting case of intestinal obstruction.

The secretary received a letter from Dr. M. R. Damron of this county who is now located at Fort Sheridan, Ill. The Doctor returned from France recently with a captain's commission.

The next meeting will be held on the second Wednesday in October at the Florence Hotel, Carrollton, where a special program and good things to eat will be provided.

E. E. BRUNNER, M.D., Secretary.

## GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society met in the Public Hall in Red Bird, on Thursday, Oct. 9, 1919, Dr. M. E. Spurgeon, president. The following doctors were present: M. E. Spurgeon, J. J. Ferrell, John B. Underwood, C. A. Binge, John D. Seba, and I. M. Owens.

The following subjects were discussed: "Hernia, When and Under What Condition to Operate"; "Gallstones, When to Operate"; "The Use of Pituitrin in Medical as Well as Obstetrical Practice." It developed that many doctors in this territory are using pituitrin when blood pressure is low and heart is weak.

The next meeting will be held in Bland, Dec. 11, 1919.

JOHN D. SEBA, M.D., Secretary.

## MARION COUNTY MEDICAL SOCIETY

Our regular meeting was held on Friday evening, October 3. There were present Drs. Bourn, Bounds, Chowning, Hill, Hornback, Waldo and Ross.

Many matters of interest came up for discussion—collections, whether or not we should raise our fees, supplying doctors for an influenza epidemic if conditions such as existed last winter should arise again. Dr. Waldo said he would go if there was an emergency.

MARY S. ROSS, M.D., Secretary.

## SCOTT COUNTY MEDICAL SOCIETY

The Scott County Medical Society met at Illmo and elected officers for 1920 as follows: President, L. S. Mayfield, Illmo; vice president, G. S. Cannon, Fornfelt; secretary and treasurer, E. J. Neinstedt, Blodgett.

E. J. NIENSTEDT, M.D., Secretary.



## ST. CLAIR COUNTY MEDICAL SOCIETY

The St. Clair County Medical Society met at Osceola, September 26, and elected the following officers for 1920: President, Ruth Seevers, Osceola; vice president, E. W. Sullivan, Osceola; secretary and treasurer, A. C. Ward, Osceola.

A number of clinical cases were reported by the members and thoroughly discussed. The next meeting of the society will be held at Appleton City on the first Tuesday in November.

G. D. DALGLEISH, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1919, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**CULTURE-LAC.**—A culture of *Bacillus bulgaricus* in whey, marketed in bottles containing about 4 fluid-ounces. It is adapted both for internal and external use (see general article on Lactic Acid-Producing Organisms and Preparations, New and Nonofficial Remedies, 1919, p. 155). The date of issue is stated on the label of each bottle. Geck Laboratory, New York (*Jour. A. M. A.*, Sept. 6, 1919, p. 767).

**BENZYL ALCOHOL-VAN DYK.**—A brand of benzyl alcohol which complies with the New and Nonofficial Remedies standards. For a description of the actions, uses and dosage of benzyl alcohol see New and Nonofficial Remedies, 1919, p. 52. Van Dyk & Co., New York City.

**CINCHOPHEN.**—A nonproprietary name applied to phenylcinchoninic acid (*Acidum Phenylcinchoninicum*, U. S. P.). For a description of the actions, uses and dosage, see under Phenylcinchoninic Acid and Phenylcinchoninic Acid Derivatives, New and Nonofficial Remedies, 1919, p. 226.

**CINCHOPHEN-ABBOTT.**—The Abbott Laboratories have adopted the name cinchophen for the product accepted for New and Nonofficial Remedies as phenylcinchoninic acid-Abbott (see New and Nonofficial Remedies, 1919, p. 227).

**CINCHOPHEN-MORGENSTERN.**—Morgenstern and Company have adopted the terms cinchophen and sodium-cinchophen-water for the products accepted as acid. phenylcinch.-Morgenstern and sodium phenylcinch. water-Morgenstern (see New and Nonofficial Remedies, 1919, p. 227).

**CINCHOPHEN-CALCO.**—A brand of cinchophen. It complies with the standards for *Acidum Phenylcinchoninicum*, U. S. P. The Calco Chemical Co., Newark, N. J. (*Jour. A. M. A.*, Sept. 13, 1919, p. 837).

**CHLORAZENE SURGICAL GAUZE.**—Gauze impregnated with, and containing approximately 5 per cent. of chlorazene. For a description of chlorazene, see New and Nonofficial Remedies, 1919, p. 137. The Abbott Laboratories, Chicago.

**NOVASPIRIN.**—A compound of anhydro-methylene-citric acid and salicylic acid. For a discussion of the actions and uses of Acid Derivatives of Salicylic Acid (*Acetylsalicylic Acid Type*), see New and Nonofficial Remedies, 1919, p. 250. The dose of novaspirin is 1 gm., several times daily. The Winthrop Chemical Co., New York City (*Jour. A. M. A.*, Sept. 27, 1919, p. 987).

## PROPAGANDA FOR REFORM

**AMERICAN MADE SYNTHETIC DRUGS.**—P. N. Leech, W. Rabak and A. H. Clark report on the work which was done in the A. M. A. Chemical Laboratory in the efforts to overcome the shortage of synthetic drugs during the recent war. In particular they report on the examination of and the establishment of standards for procaine (novocaine), barbital (veronal), phenetidyl-acetphenetidin (holocaine) and cinchophen, or phenylcinchoninic acid (atophan), manufactured under Federal Trade Commission licenses. They report that the shortage of German synthetics was not felt seriously in most cases because the demand for them had been artificially created, and that the few which were in great need are being rapidly replaced by American made drugs. The report explains how the Federal Trade Commission granted licenses to American firms for the manufacture of German synthetics which were protected by U. S. patents, and how these licenses were issued only after an examination of the firm's product in the Association's chemical laboratory had demonstrated that its quality was satisfactory and equal to that of the drug formerly imported from Germany. It is interesting to observe, the report declares, that of all the synthetic drugs imported into this country from Germany and on which American patents had been issued, the demand was sufficient only to make it commercially profitable to manufacture four of them on a commercial scale, namely, arsphenamine (and neoarsphenamine), barbital (and barbital sodium), cinchophen and procaine. The chemists caution that, in view of the agitation to found an institute for cooperative research as an aid to the American drug industry, it will be well for the American medical profession to be on its guard against new and enthusiastic propaganda on the part of those engaged in the laudable enterprise of promoting American Chemical industry (*Jour. A. M. A.*, Sept. 6, 1919, p. 754).

**BENZYL BENZOATE.**—Although the benzyl esters have been known only a short time in medicine, the possibilities of their usefulness in certain fields of practice is becoming apparent. Benzyl benzoate has already been accepted for New and Nonofficial Remedies. The therapeutic applicability of benzyl esters arose from the investigation of opium alkaloids by D. I. Macht. The study demonstrated that opium alkaloids may be divided into two classes: the pyridin-phenanthrene group, of which morphin is the type, and the benzyl-isoquinolin group, to which papaverin belongs. The former was found to stimulate contractions of unstriated muscle, whereas the papaverin-like alkaloids inhibit the contractions and lower the muscle tone. A search for simpler, non-narcotic compounds of the latter which might still act in inhibitory manner on smooth musculature led to the use of benzyl acetate and benzyl benzoate. Ureteral colic and excessive intestinal peristalsis have been found to yield to the tonus lowering action of these two drugs. Apparently satisfactory results from the use of benzyl benzoate in dysmenorrhea have recently been reported (*Jour. A. M. A.*, Sept. 6, 1919, p. 770).

**IODIN TINCTURES, WATER SOLUBLE.**—T. Sollmann has investigated the claim that certain proprietary iodine preparations are superior to the official tincture of iodine and to compound solution of iodine (Lugol's solution). The claim of superiority is based on the allegation that the potassium iodide in the official preparations causes local irritant action. Since the proprietary preparations have been shown to contain free hydrogen iodide, this claim seemed improbable to Sollmann, and he surmised that apparent decrease in irritant effects was due to a lower iodine content of the proprietaries, such as Burnham's Soluble Iodine

and Sharpe and Dohme's Surgodine. From experiments which he conducted with the various iodine preparations, all diluted to the same iodine strength, Sollmann concludes: The presence of potassium iodide in the official tincture of iodine does not seem to render this preparation more irritant. On the contrary, it is somewhat less irritant to the skin and much less precipitant to protein than the simple alcoholic tincture or the secret and nonsecret "miscible tinctures." The more even spreading and the more rapid coagulation of proteins render the simple alcoholic solution of iodine probably the best for the "disinfection" of the skin, while the delayed protein precipitation of the U. S. P. tincture would probably render this somewhat superior for the disinfection of open wounds (*Jour. A. M. A.*, Sept. 20, 1919, p. 899).

**CASE'S RHEUMATIC SPECIFIC.**—More than five years ago *The Journal A. M. A.* exposed Case's Rheumatic Specific, the A. M. A. Chemical Laboratory showing that its essential drug was sodium salicylate. Now comes the United States Postoffice and interferes with Mr. Case's presumably lucrative quackery by denying him the use of the mails. In recommending the issuance of a fraud order, the solicitor of the postoffice department declared: "Mr. Case, the respondent herein, is not a physician and has had little opportunity for study along medical lines. . . . He knows nothing of the effect of drugs and he is incompetent to prescribe their use. When he sells one form of treatment for all forms of rheumatism, irrespective of the superinducing cause or causes of the trouble, he well knows that it is mere guesswork on his part—a hit or miss chance of recovery, and when he calls such a treatment a 'Specific for Rheumatism,' and solemnly urges its use as a cure for practically all forms of rheumatism he knows that he is not acting in good faith, and his scheme for obtaining money through the mails by such means should be suppressed" (*Jour. A. M. A.*, Sept. 13, 1919, p. 852).

**THE LUCAS LABORATORY PRODUCTS.**—The products put out by the Lucas Laboratories, New York City, are for intravenous use, and the method of exploitation indicates that the concern is less interested in the science of therapeutics than in taking commercial advantage of the present fad for intravenous medication. The composition of the products is essentially secret, which in itself should be sufficient to deter physicians from using them. Even the hieroglyphics that used to be palmed off on the medical profession by nostrum exploiters under the guise of "graphic formulas" are outdone by the "formulas" of the Lucas Laboratories: "'Luvein' Arsans (Plain)" is said to be: "Di hypo sodio calcio phosphite hydroxy arseno mercuric iodide." The first part of this "formula" might stand for sodium and calcium hypophosphite. The remainder is meaningless except that it suggests (but does not insure) the presence of arsenic and mercury iodide. "'Luvein' Arsans, Nos. 1, 2 and 3."—"Meta hydroxy iodide sodio arsano mercuric dimethyl benzo sodio arsenate, ai oxy sodio tartaria sulpho disheuy hydrazin." Who can venture even a conjecture as to the possible significance of this? The proposition offered to physicians by the Lucas Laboratories, Inc., is an insult to the intelligence of the medical profession. Physicians should heed the warning of the Council on Pharmacy and Chemistry that intravenous therapy should be employed only when most positively indicated. Further, because of the inherent danger of intravenous medications, physicians should use the products of firms of unquestioned scientific standing only (*Jour. A. M. A.*, Sept. 20, 1919, p. 927).

**CASE'S RHEUMATIC SPECIFIC.**—The postoffice authorities announce that the fraud order against Jesse A. Case has been revoked because Case has agreed to discontinue the sale of his Rheumatic Specific (*Jour. A. M. A.*, Sept. 20, 1919, p. 928).

**SECRET REMEDIES AND THE PRINCIPLES OF ETHICS.**—There are on the market today and used by members of the American Medical Association, dozens, yes scores, of widely advertised proprietaries that are, to all intents and purposes, secret. The physicians who prescribe them do not know and cannot know what they are giving their patients. On this point Section 6, Chapter II, of the Principles of Medical Ethics of the American Medical Association says: ". . . unethical to prescribe or dispense secret medicines or other secret remedial agents, or to manufacture or promote their use in any way." The inherent and basic reasonableness of the various requirements of the Principles of Medical Ethics needs no exposition or defense (*Jour. A. M. A.*, Sept. 27, 1919, p. 992).

**THE DIRECT SALES CO.**—The Direct Sales Co., Inc., Buffalo, sells its drugs to physicians by mail, and features a "profit-sharing rebate." The concern has guaranteed its products to be in accordance with the Food and Drugs Act, and to be equal, if not superior, to any on the market. One of the Quarterly Bulletins of the State Board of Health of New Hampshire, issued last year, announces that the following preparations of the Direct Sales Company were found substandard: "Tablets salicylic acid, 5 grains (1.72 grains found); Tablets acetylsalicylic acid, 5 grains (2.31 grains found); Tablets acetanilid, 3 grains (1.88 grains found); Tablets codein sulphate, 1/4 grain (1/15 grain found); Tablets nux and pepsin No. 2, claiming pepsin 1 grain, extract nux vomica 1/10 grain (found to have a gross average weight per tablet of only 1.17 grains, 0.54 grain of which was represented by sugar and other medicinally inert material); Tablets Infant's Anodyne (Vaugh) showed serious discrepancy from formula." Subsequently the Federal authorities examined the products of the Direct Sales Company, and Notice of Judgment No. 6193 describes cases of adulteration and misbranding of some of the drugs put out by the Direct Sales Company (*Jour. A. M. A.*, Sept. 27, 1919, p. 1001).

## BOOK REVIEWS

**THE HEALTH OFFICER.** By Frank Overton, M.D., D.P.H., Sanitary Supervisor, New York State Department of Health, and Willard J. Denno, M.D., D.P.H., Medical Director of the Standard Oil Company. Octavo of 512 pages, with 51 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$4.50 net.

Public health is a subject too frequently unknown by the so-called public health officer. This book is primarily designed to give the health official who wants to serve the people an idea of what his duties are and how to run his job. It is, moreover, designed to serve as a guide to students, nurses, social workers, teachers and others. The work deals with the organization and powers of a health department; the relation of the public and of the physician to the health officer; with records and reports and standard procedures, vital statistics and publicity and education. Laboratory fundamentals and details are covered and communicable diseases handled by chapters on each disease. A considerable part of the book deals with sanitation and there are chapters on vermin, milk, food values, nuisances, household waste, sewage, water supplies, ventilation, etc.

The text is well written, the subject matter well arranged and carefully indexed, and the illustrations are interesting. The book should have a wide circulation among all who are interested in preventive medicine.

R. L. T.



THE OXFORD MEDICINE. Advance pages. Edited by Henry A. Christian and Sir James Mackenzie. Volume I, Parts 2 to 4, pp. 109 to 503. London: Oxford University Press; American Branch, 35 West Thirty-Second Street, New York. To be published in Five Volumes. Royal 8vo. Price, \$52.50. Part 1 of Volume I has already been reviewed in

these pages. The succeeding three parts have now appeared. The second begins with a chapter on Pathological Physiology by Hewlett. The reviewer decided to scan it but found himself reading it carefully twice before laying it down. The chapter is really a condensed presentation of the philosophy of internal medicine. The late Dr. Jaggard used to say that every doctor should have some logical treatise which he should read from time to time for the purpose of limbering his mind to right thinking. This chapter may be commended for just such a purpose.

The second chapter is one by Hinsdale on Hydrotherapy. This chapter reminds me of a reply made to me by a patient of mine who had spent some time at a springs: "Them water fellers know a heap," was his reply to my query as to the general impression he had gotten of the treatment.

The first chapter of the third faculous is by Sir William Osler on "The Treatment of Disease." Where is the reviewer who would have courage to add aught to this simple statement? The second chapter is on "The Living Causes of Disease and How They Act," by J. J. Mackenzie, and the following, on the "Eugenics in Relation to Medicine," by no less an authority than Charles B. Davenport. One cannot be expected to pause with these when he notes just below them one on "Focal Infections," by Billings. Those of us who sat at Billing's feet as students know that he himself is a focus of infectious enthusiasm on whatever subject he may be discussing and those who were so unfortunate as to have missed this influence can in a measure recoup their loss by a perusal of this chapter.

The fourth faculous is equally interesting. The dominating section on "Acidosis" is by Henderson. This chapter makes something of the same impression on the reviewer that the article on Zoology in the Encyclopedia Britannica by Huxley did when as a youth he decided one day to find out all about zoology. The impression is that it is a very big subject and in order to really comprehend it much patient toil must be expended before it will be possible to comprehend the fundamental factors.

The general impression the perusal of these portions of the work leaves on the reader's mind is that there must be something big and unusual coming and one instinctively wishes that the sections dealing with specific diseases would appear. These parts are on such a high plane that one wonders if the same pace is possible in the discussion of disease entities. We shall see by and by what we shall see. J. M. B.

THE NERVOUS HEART: Its Nature, Causation, Prognosis and Treatment. By R. M. Wilson, Captain, R. A. M. C.; late assistant to Sir James Mackenzie, under the Medical Research Committee, etc.; and John H. Carroll, Major, M. C., U. S. A., Specially Attached Trench Fever Committee, etc. London: Oxford University Press, Warwick Square, E. C.; American Branch, 35 West Thirty-Second Street, New York, 1919. Price, \$2.50.

In this little book the authors give an exhaustive description of the cardiac manifestations of a neurosis. The foundation for the book is the work done by Eppinger and Hess on vagotonia. It is claimed that a hyperirritable vagus may lead to an overactive sympathetic, and in four such cases minimal doses of atropin ( $\frac{1}{200}$  grain) reduced the pulse rate in four minutes an average of 20 beats per minute. To reduce the tachycardia they advocate thyroid extract,

one grain a day along with the atropin. In cases of slow pulse, low blood pressure and altered vagal tone due to sympathetic augmentation being insufficient to overcome vagus irritability, large doses of atropin ( $\frac{1}{40}$  grain intravenously three times a day) are advised. Dizziness, giddiness and cardiac pain are also explained by the disturbed balance between the sympathetic and vagus.

Although the book is not easy to read it contains a few points of great practical importance. P. T. B.

VENEREAL DISEASES. A Practical Handbook for Students. By C. Y. Browning, M.D., D.P.H., Director of the Bland-Sutton Institute of Pathology of the Middlesex Hospital, and David Watson, M.B., C.M., Lecturer on Venereal Diseases, Glasgow University, etc. With an introduction by Sir John Bland-Sutton, F.R.C.S. London: Oxford University Press, Warwick Square, E. C.; American Branch, 35 West Thirty-Second Street, New York, 1919. Price, \$6.50. This is a valuable little book and should be in the

library of every physician who is thrown in contact with venereal diseases. The illustrations are excellent particularly the photomicrographs, and the text is clear, succinct, and well-balanced. A little space might profitably have been given to the technic of intramuscular injections of salvarsan (arsphenamine). In discussing the method of intravenous administration the authors say: "The escape of even a dilute solution into the subcutaneous tissue should be avoided owing to its highly irritating local effect." If the solution exerts a "highly irritating local effect" on connective tissue what happens when it hits the tender, fragile endothelium of the vein into which it is injected? The fact that the vessel is not equipped with sensory nerve endings does not weaken the argument in the least for the damage is done even though the patient (and as a rule his physician) is ignorant of it.

The section on gonorrhea is well and clearly written and is as exhaustive as possible in a book of this size. R. L. S.

THE MEDICAL AND SURGICAL ASPECTS OF AVIATION. By H. Graeme Anderson, M.B., Ch.B., F.R.C.S., with Chapters on Applied Physiology of Aviation, by Martin Flack, M.A., M.B., and The Aero-Neuroses of War Pilots, by Oliver H. Gotch, M.B., Ch.B., M.R.C.P. London: Oxford University Press, Warwick Square. American Branch, 35 West 32d Street, New York. 1919. Price, \$5.

To one interested in aviation and aviators, whether he be layman, examining surgeon or aviator, a perusal of these pages will well repay him for the time spent. To the layman the history of air flying and its rapid development and the complex field covered is of great interest. For the medical man and student the many phases of this subject and the extreme care necessary in the selection of candidates for flying, this subject holds the attention. The ceaseless vigilance on the part of the spectacular flier and the constant exactitude required at the hands of the less heralded mechanic make this method of transportation a matter of special and timely interest. This volume has touched on many interesting sides of aviation and has covered the subject as well as possible in a small compass. F. E. W.

CLINICAL MICROSCOPY AND CHEMISTRY. By F. A. McJunkin, M.D., Professor of Pathology in the Marquette University School of Medicine, etc. Octavo volume of 470 pages with 131 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$3.50.

Somewhat more than two-thirds of the book is devoted to clinical microscopy, serology, bacteriology and chemistry. In 300 rather small pages, in which

(Continued on adv. page xviii)

# THE JOURNAL

OF THE

## Missouri State Medical Association

The Official Organ of the State Association and Affiliated County Societies  
Issued Monthly under direction of the Publication Committee

Volume XVI

CHICAGO, ILL., AND ST. LOUIS, MO., DECEMBER, 1919

Number 12

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### ORIGINAL ARTICLES

#### NERVE SUTURE\*

FRANCIS REDER, M.D.  
ST. LOUIS

A wonderful amount of tissue trauma has been thrown into the surgical field by the great world war and the investigations and observations conducted by surgeons skilled in their respective specialties, their progressive thoughts working along a multitude of different radiants, will eventually illumine those methods of treatment whose values show the evidence in their favor.

The field of neural surgery will most likely present departures from its accepted standards which have for years been fostered by an inherent weakness. We are not immune from the possibility of becoming narrowed to a line of thought, and though our recognition of these departures may be slow, the chasm of ignorance must become rapidly bridged in the light of the newer advances.

In a recent address at the Sorbonne, it is reported that Col. Joseph A. Blake remarked that "there has been little new in the development of surgical knowledge during the war." This expression must not be taken too broadly inasmuch as Dr. Blake most likely addressed his remarks to the treatment of wound infection. On the other hand, Col. Sir Berkeley Moynihan gives a very common sense expression of his experience relative to some of the methods employed in neural surgery; cherished methods perhaps of the hyperenthusiast, and plainly states that he has found these methods wanting in their accredited value, for instance: "It has been the fashion with many surgeons to surround the sutured nerve with some material supposed to have protective virtues. A piece of vein, the saphenous, for example, is threaded over the upper cut end of the nerve

before suture, and after the ends are approximated the vein is drawn downward and made to surround the line of suture. In other cases a piece of fat dissected from near the wound, or from another part, is wrapped round the nerve; fat being supposed to be capable of insulating the nerve in its new position; or a layer of fascia may be used, or a piece of Cargile membrane. The value of all such methods is open to serious question; it is certain that they are sometimes harmful, it is doubtful if they ever help." To his reasoning they prevent access of blood to the nerve by new channels. They cause adhesions and compression of the nerve and at times they are discharged from the wound almost unaltered. It is his opinion that it is better to avoid such membranes and be content with suturing the nerve and placing it along the path of uninjured tissues.

Relative to nerve anastomosis this eminent authority speaks most discouragingly, and whether or not the implantation is done with or without section of the nerve fibers of the intact nerve, in his opinion all such procedures are worthless and cannot be too strongly condemned. Sir Moynihan has never seen any good come from them; indeed, nothing but harm could conceivably result from section of a healthy nerve. Lengthening of the nerve by turning down a strand from the upper divided end, or the bridging of the gap by strands of catgut, are methods with nothing whatever to recommend and everything to discredit them. The deductions from his experience find expression in these words: "There is no justification for this procedure now-a-days and it should be cast out among forgotten things."

In a manner these utterances from so skilled a surgeon and close observer must be looked on and accepted as new evidence in the field of neural surgery, because it tends to show the uselessness of the various procedures, thereby doing away with much unnecessary surgery. Yet when we hear of the successful outcome of a nerve resection (sciatic, to the extent of 10¾ inches, in which the ends were joined by

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



"bridging" (Mackenzie), or of the successful issue in a spinofacial or a hypoglossofacial anastomosis (Cushing), we cannot fail to see some light which gives us encouragement in operative measures of this type for the more serious neural conditions, even though Mr. Moynihan has mirrored to us his experience in a rather gloomy picture.

With this preamble concluded, let us consider one of the fundamental principles of nerve surgery, that of suture. No matter how perfectly the severed nerve can be demonstrated, and no matter how satisfactorily the nerve ends can be apposed, as long as these nerve ends are not properly vivified and secured by a correct suture the normal process of repair will be hindered and the conductivity of the nerve proportionately inhibited.

What are the essential requisites for a successful nerve suture? A consideration of great importance is a thorough knowledge of topographical anatomy that the least amount of trauma may be inflicted on the soft tissue during the search for the injured nerve. The executions during the dissection must be that of a well trained surgeon. The finger should never be placed in the wound and the most perfect and scrupulous asepsis must be maintained. When the nerve is exposed, instruments, especially forceps, must be used with the utmost care lest the nerve might be bruised by seizing it, nor should it be twisted or unduly handled. In liberating it from structures with which it has become adherent it is far better to dissect these structures from the nerve than the nerve from them. During such a dissection two points, which can materially aid in placing the suture provided the anatomical findings are favorable, must not be overlooked. By not freeing the nerve entirely from its adhesions and allowing only a partial attachment at some advantageous point, a delicate fixation of the nerve is maintained which facilitates the placing of sutures. Furthermore, axial rotation is not so liable to occur, thus insuring the maintenance of greater accuracy of the internal topography of the nerve. Again in the liberation of the nerve any adventitious tissue which may adhere to it might serve as a far better medium in placing the sutures and causing them to hold, than with the nerve dissected entirely bare. Devascularization of the nerve must be guarded against. It should not be stripped bare for too long a distance, nor should it be unduly separated from its bed. The wound and in particular the nerve must not be allowed to become dry, yet the wound must be free from blood which might have collected through oozing from capillary vessels. Nerve ends often bleed considerably. Such bleeding must be absolutely checked before suture is attempted. This can be readily

accomplished by gently holding bits of muscle tissue over the nerve ends. The procedure can in no way damage the internal architecture of the nerve. Blood between the nerve ends aids materially the amount of connective tissue formation during the reparative process.

The regenerative potency of a divided nerve constitutes a most interesting chapter in tissue repair. In surgery the action rests wholly on the neuron principle, the neuron being the unit of the nervous system. It is made up of a central cell body with a nucleus. Long extensions called axons are attached to it. Some of these extensions are short and are known as telodendrites and go to the central cell body; others are still shorter and go to the muscle plates. These are called telodendrones. Nerve bundles, the brush-like ends of the fasciculi, are held together by neuroglia. It is the object of the surgeon to have a nerve union produced by the neuroglia type of connective tissue, to permit the transmission of axis-cylinders better than through the ordinary connective tissue type of union. Repair must be made by means of the proliferation of glial tissue in the large axons. Every nerve axon is made up of three elements, an axis cylinder, a medullary sheath and a neurilemma. It is for this reason that the surgeon must use all possible means for preventing the intervention of connective tissue from the outside.

In the regeneration of a nerve after operation a congestion of the cells composing the neurilemma takes place. The neurilemma being the regenerative sheath of the nerve, it prepares the connective tissue tube through which the axons from the proximal side can pass to the periphery when there is contracting with the peripheral portion of the axis-cylinder. In neural repair the fact must not be lost sight of that there is always a positive chemotactic attraction between the central cell bodies, and if there is not too much interposition of ordinary connective tissue, an axonal contacting resulting in regeneration of the axis-cylinders can become a possibility.

It may be readily seen how vital it is for the restoration of function that the nerve ends receive the most accurate apposition, and how the degree of efficiency for conduction is influenced by the amount of connective tissue which is interposed between the nerve ends.

Accuracy of apposition without tension of the nerve ends may under certain conditions be found impossible. When the surgeon is confronted with such a problem, various procedures to shorten the course of the nerve may be adopted. Flexion of the limb may sometimes be sufficient to bring the nerve ends together without endangering the suture line. Division of the median nerve low in the forearm, if the defect is not too great, may by flexion of the wrist

secure apposition of the nerve ends favorable to suture. In case of injury to the ulnar nerve, its route may be shortened by dislocating the nerve from its bed and bringing it to the front of the inner condyle.

An injury to the musculospiral where difficulty in apposition is encountered may demand an excision of a portion of the humerus to permit the bringing together of the nerve ends.

No matter what the obstacles for a proper apposition of the nerve ends might be, they must be overcome to insure a successful suture. The suturing of nerve ends under tension will invariably result in failure. Another important consideration for a successful nerve suture rests with proper vivification of the nerve ends, i. e., in those cases where a secondary suture is undertaken. In recent nerve injuries where an immediate suture is attempted, such tissue changes do not exist about the nerve ends and the suture is placed in normal tissue. A severed nerve, where time has permitted a connective tissue capping, presents a condition analogous to an ununited fracture of a bone. So long as the ends of the bone fragments are covered by a fibrous capsule, soft tissue, or any other interposed material, union can not take place. Likewise in a divided nerve the ends are covered by an interposing material which prevents axonal contact, and this interposing tissue must be removed from both the distal and proximal ends of the severed nerve before the suture is placed. The pathology found at the site of an injured nerve is extremely interesting. If the nerve is completely divided the proximal end will usually present a bulbous expansion which has been designated as a fibrous neuroma. The distal end will not present such a pronounced peculiarity, but will appear somewhat atrophic, with a distinct connective tissue capping. Frequently a bridge of fibrous tissue is found connecting the ends of a divided nerve. In the subsequent surgical work this bridge of fibrous tissue can be of much help in securing the desired relationship of the nerve ends, especially when recourse must be had to nerve stretching in lessening the interval between the existing gap. It is well to preserve these fibrous ends to the last, as they serve as a good "catch" for the forceps when traction on the nerve is made, thereby saving the neural tissue from injury.

In the preparation of the nerve ends for suture infinite gentleness and care must be exercised in handling these strictures. The section should be made preferably with a very sharp knife. Every particle of fibrous tissue must be removed. The section must reveal the living axons, that the axis-cylinders coming from above can have free entry into the nerve below. This is an exceedingly delicate part of the operation and experience is the infallible guide. Although the placing of the nerve suture would

appear a minor procedure when compared to the preparatory measures necessary for its introduction, certain niceties become imperative. A consideration of the first latitude calls for the proper suture material and an appropriate needle. Another consideration calls for the most advantageous manner in placing the suture while still another demands the best protection for the newly created juncture. Of the suture material it can be said that the finest catgut (000) should be used for nerves whose size will permit its introduction. An exception must be made for very small nerves, and here the finest silk should be given preference. Silk is an excellent suture material for nerves, especially when there is an adequate neural sheath through which the sutures can be passed without encroaching on the nerve tissue proper. It should of course not be employed where it becomes imperative to pass the suture through neural substance.

The antagonistic views regarding this suture material are in my mind more imaginary than real. It is true silk provokes a prolonged irritation on the immediate structures with which it comes in contact. This irritation may incite an undue proliferation of ordinary connective tissue cells, which may or may not cause disturbances in the internal anatomy of the nerve. If the silk is of the finest thread and the suture correctly placed such disturbances are remote, to this eight cases of successful nerve suture in my experience bear proof.

The advances in the preparation of surgical suture material, however, have given us such a satisfactory catgut that the preference should be given to it, provided the nerve is not too small to permit of its usage. The needle for a nerve suture should be selected with great care. A round intestinal needle, not too large, with either half or full curve and possessing a spring eye is the ideal needle. In practice it is usually the simple transverse division of the nerve which demands an end-to-end union. Occasionally a nerve is divided obliquely. The union in such cases will be by lateral suture. It does not matter how the nerve is divided the principle of placing the suture remains the same. During the introduction of the sutures it should be emphasized that the manipulation of the nerve must be scrupulously gentle. Delicately toothed forceps should catch hold of the nerve sheath only and under no circumstances must the nerve ends be squeezed.

All sutures should be introduced in line with the axis of the nerve; this will incur the least amount of traumatism to the fasciculi. This point in the technic is important because the nerve sheath may be so delicate that an encroachment on the nerve tissue proper cannot be avoided.



Experience has approved the usage of two types of suture, a tension suture introduced through the whole thickness of the nerve a half inch above and below the cut end. This suture transfixes the nerve and takes off the tension from the sutures which later secure the nerve ends. In the smaller nerves such as the ulnar or radial one tension suture is usually sufficient. The larger nerves, such as the median or musculospiral, require two, while in a nerve the size of the sciatic, three tension sutures are introduced. Tension sutures are introduced either anteroposteriorly or laterally, and if two are employed it is a good plan to pass one in each direction. Care must be exercised during their introduction not to create an undue axial rotation of the nerve.

In the tying of the tension sutures their true object becomes apparent in facilitating the approximation of the divided ends without tension.

The second type of suture is the coaptation suture. It is introduced after the tension suture has been tied. The function of the coaptation suture is to properly approximate the nerve ends and prevent lateral displacement. A few sutures of this type will usually suffice. Encircling the whole nerve is not necessary, especially when the posterior aspect of the nerve could only be reached with difficulty. If two-thirds of the circumference of the nerve has been sutured the remaining third can be ignored. Coaptation sutures go through the nerve sheath only and are inserted about one-eighth of an inch from the line of union.

In tying the tension and coaptation sutures a certain delicacy of touch must be exercised that can only be acquired through practice, the object is to secure the sutures in such a manner as to prevent too much play of the tissues which they are supporting, or constrict the tissues with which they are contacting.

The final disposition of a sutured nerve may either aid in securing a successful issue or it may be instrumental in undoing a piece of laborious work. The position of the limb giving the best possible relaxation of the sutured nerve must be absolutely maintained by proper appliances until union of the nerve ends has taken place. The time of immobilization usually ranges from six to ten weeks.

A further protection for the juncture is a dry wound. All accumulated blood must be removed and hemostasis must be absolute. If possible the nerve is to be replaced in its natural channel and if this is not feasible the line of union should be imbedded in muscle, and the muscle tissue sewn all around it. The wound is closed without drainage.

In estimating the probable result of a nerve suture the first consideration is that the ends

of the axons are contacted, the second consideration is that there will be no intervention of ordinary connective tissue between these ends after they have been approximated by suture, and the third consideration is the proper protection of the new juncture.

Nerve operations are operations of choice. They require a thorough knowledge of topographical anatomy and all the necessities that go to make the ritual of a well trained surgeon.

University Club Building.

#### PHYSIOPATHOLOGY OF INTESTINAL OBSTRUCTION \*

EUGENE P. HAMILTON, M.D.  
KANSAS CITY, MO.

Our knowledge of the physiology and pathology of intestinal obstruction previous to 1905 was very meager. Surgeons for years had observed clinically how fatal the condition was, but had taken little note of its pathology other than to observe that gangrene and peritonitis were frequently encountered. Most of their endeavors had been along the line of noting the various causes of intestinal obstruction and devising operations for its relief.

Physiologists had taught that excision of half of the intestinal tract at the jejunal end would result in more serious consequences than a similar excision at the iliac end.

Diliberti-Herbin in 1903 found no difference in the digestive capacity of two dogs, the upper half of the small intestine in one, and the lower half in the other having been removed. These observations were conducted for ninety-three days and the dogs soon regained their weight and both completely recovered.

There had been a few investigations into the metabolic changes in these cases. Ruggi, Schlatter, Lexer and especially Zusch, Ziedler, Axhausen and Flint (cited by Moynihan) had shown that the absorption of fat and nitrogenous food is considerably lessened at first, but that this may be compensated by an increased intake or by careful regulation of the foodstuffs.

The outcome of the study of these recorded cases would seem to show that a resection of two-thirds of the small intestine of a human being may be performed without serious risk to life. The above experimental work threw some light on the physiology of the intestinal tract, especially that with which we are concerned in intestinal obstruction, viz., that one part of the small intestine, when another part is removed, may adapt itself to do the work of the excised portion.

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.

It is to the work of Maury in 1906 that we are indebted for the inspiration which has stimulated investigators to become interested in the problem of intestinal obstruction. This work was begun with no thought of intestinal obstruction, but had for its object the testing of the efficacy of the twine triangular ligature for gastro-enterostomy. By this method the stomach was shut off from the lower bowel for seventy-two hours, the time required for the triangular ligature to cut through. Six dogs were thus operated on, the duodenum being cut in two and its ends invaginated. The triangular gastro-jejunosomy then being performed. To Maury's surprise, the dogs all died within twenty-four to forty-eight hours. The investigator's curiosity was then aroused and he set out to ascertain the cause of death in these dogs. After some laborious work he found that if the jejunum were sectioned 35 cm. from the pyloric end of the stomach, that the animal would not die within seventy-two hours, the time taken for the twine triangular ligature to cut through. The cause of death was not determined, but the publication of this interesting observation has been the means of arousing other investigators with the result that a large amount of literature has developed.

From all of this experimental work there seems to be three principal theories as to the cause of death:

1. The theory of nervous reflex which assigns the collapse and death to an irritation of nerve filaments to the intestinal wall.
2. The theory of infection by direct passage of organisms through the wall of obstructed loop into peritoneal cavity, blood stream or lymphatics.
3. Theory of autointoxication which attributes death to absorption of some substance produced in the contents of the obstructed loop. This substance or toxin is thought by some investigators to be the result of bacterial activity, while by others to a disturbance in the normal secretion of the intestinal mucosa.

As to the first, Murphy and Vincent say: "Section of the splanchnics, which wholly disconnect the intestine from the central nervous system, fails to alter in the least the fatal course of the infection." Therefore, they conclude that this theory fails to furnish a basis for a satisfactory explanation of the fatal issue.

J. W. Draper Maury very wisely points out in this connection that clinically it has been observed that there is much more shock resulting from cutting the intestine in various places, the nearer the pylorus the greater the shock, and furthermore that operations in the remotely aboral portions of the ileum which were associated with precisely the same amount of traumatism as those of the duodenum and jejunum

show conclusively that nervous shock has nothing to do with cause of death in intestinal obstruction. Again, he says that if a dog will live for weeks with an ileac obstruction and die within a few hours with duodenal obstruction, and that the same dog can be made to live also for weeks if drainage be instituted, something more than mechanical injury must be the cause of death.

Hartwell and Hoguet say that they are unable to find in the literature any experimental work that is convincing that the nervous system is at fault, and that while as death approaches there is a profound disturbance of the nervous control of the heart, blood vessels and respiration, yet this, the belief is, is in no sense a reflex disturbance, nor is it the result of an anemia, per se, of the nerve centers. From all these opinions it would seem that convincing evidence is lacking, that the nervous reflex plays any important roll in the cause of death.

Experimental evidence in support of the theory of direct passage of bacteria through the wall of obstructed loop is much more abundant. Proof of this is seen clinically in an occasional peritonitis as complication of intestinal obstruction without perforation.

Hartwell and Hoguet point out in favor of this theory that colon bacilli are frequently found in the blood in cases of intestinal obstruction and in the bacteremia from the *Bacillus typhosis* when the intestine is ulcerated by the action of that organism. This latter cannot be denied, yet there is a question as to whether the bacteria in the obstructed loop behave the same as do the typhoid bacilli in cases of typhoid. The analogy is not exactly comparable since the pathology is entirely different.

The same investigators admit that bacterial invasion in a case of intestinal obstruction is not an essential accompaniment; that it occurs most often when the obstruction is complicated by strangulation; the obstruction will kill without bacteremia.

The experiments of Hartwell and Hoguet along this line are interesting and instructive. In one series, the obstructions were produced by dividing the intestine from 10 to 30 cm. below the pylorus and closing the ends by inversion. In all these animals, micro-organisms were found in cultures from the liver, spleen and pancreas. They attribute this to the fact that the peritoneum was soiled by the inversion of the gut at the time of the operation, and by the fact that the posts were held on the dogs several hours after death.

In a second series of experiments where the obstructions were produced by clamps, the animals were either killed when death was imminent and examined at once, or soon after death had resulted from the obstruction. This series of seven cases furnished conclusive proof that



death resulted from intestinal obstruction without any invasion of the peritoneum, liver or spleen by bacteria. The technic in this bacterial work was most efficient. The cultures were taken four in each case on slant agar or Loeffler's blood serum, or both. These were grown under aerobic and anaerobic conditions at incubator temperature. These cultures were made in the sterile room of the Cornell Bacteriological Laboratories. This is a closed cabinet ventilated through bacterial proof filter, in the roof of which is suspended an ordinary revolving lawn sprinkler. Thus the air is mechanically sterilized by washing out the bacteria. The efficiency of this room and method is demonstrated by the fact that only three air contaminations were found in several hundred cases. Cultures from the femoral blood in these animals also were without growth. The contents of the obstructed loops of intestines in these cases all showed abundant growth of bacteria.

Murphy and Vincent found that by injecting the contents of obstructed loops into the peritoneal cavity of dogs, the animals would die within twenty-four hours with all the symptoms of intestinal obstruction. They then rendered the intestinal content sterile by boiling and injecting this into the peritoneum of dogs and guinea-pigs with no symptoms resulting. They then conclude: "This intestinal content, so toxic in its original state, can be rendered innocuous by heat and therefore emphasizes the important rôle played by living bacteria in the virulent action of obstructed intestinal contents. These findings are not at all in accord with those of Murphy and Brooks. Fifteen c.c. of obstructed loop contents was diluted with 30 c.c. of distilled water and this was placed in a container in a hot water bath for ten minutes. The contents were then boiled over a free flame for one minute. This was then injected into the peritoneal cavity of a dog at 10:30 a. m. The animal died at 3 p. m. Necropsy shows the following:

1. Small amount of colorless free fluid in peritoneal cavity.
2. Peritoneum slightly injected.
3. Intestine not noticeably distended.
4. Mucosa of stomach normal, mucosa of duodenum and jejunum red and swollen.

Cultures made from abdominal cavity showed no growth. This seems to prove that death is not due to bacteria, but to some toxin which cannot be rendered inert by sterilization.

Maury in 1909 reported some very interesting results of his work. After a study of over four hundred cases of duodenal or arojejunal obstruction produced experimentally he concludes that death in these animals is due to what he calls a physiological death; that is to say, "That the intestinal barrier which closes the lumen works no ill per se save through an interfer-

ence with the physiological exchange or balance of the duodeno-jejunal secretion. In other words, he attributes to the duodenum a function of internal secretion and thinks that in some way, unproven as yet, the secretion, in unobstructed cases, is counteracted or in some way acted on by the secretion of the jejunum. His work deals almost exclusively with high intestinal obstructions, yet he ventures the opinion that a strong argument against the bacterial origin as a causal factor in death is the following:

That whereas the bacterial flora of the lower ileum is rich in pathogenic organisms, that of the duodenum is poor, yet death in the former is slow in the onset, while in the latter it is very sudden. This, of course, is in accord with our clinical findings in man.

In regard to the internal secretion of the duodenum, referred to by Maury, some recent experiments throw some light. Grey, after a review of the literature, says that the duodenum is concerned with three factors:

1. The influence which is exerted on other parts of the digestive tract by means either of reflexes or hormones.
2. The digestive juices which enter it from the liver and pancreas.
3. The digestive fluids which are poured out from its intrinsic glands. All of these factors are inextricably bound within the mucous coat.

Formerly it was thought that total extirpation of the duodenum was incompatible with life. Matthews, in a report on some experimental work in 1910, makes this statement. Minkowski in 1908 entirely extirpated the duodenum in a dog and the animal lived four weeks. Grey recently reported a case of a dog from which he removed the duodenum and the animal lived for nine and a half months, when it succumbed to an obstruction, the result of a band of postoperative adhesions. In this case the common bile and pancreatic ducts were transplanted into the jejunum and the continuity of the intestinal tract was re-established by an end to end anastomosis between pyloric end of stomach and the proximal end of jejunum.

In 1912 Stone Bernheim and Whipple reported the results of some investigations with closed duodenal loops, 12 to 15 cm. long and just distal to the entrance of the major pancreatic ducts. From some of these dogs the closed loops were resected and one of the animals lived eight weeks. From this they conclude that this part of the digestive tract is not essential to life. From these experiments it would seem that Maury's theory is not tenable.

This brings us to a consideration of the third theory as to the cause of death, viz., some toxin is formed within the obstructed loop that causes

the fatal issue. The theory of this toxin being the result of fermentation of food in the obstructed bowel is certainly not borne out in the experimental work. The animals from which all food had been withheld for seventy-two hours developed symptoms and died the same as those fed up to the time of obstruction.

Murphy and Vincent conclude from their experiments on cats, "That this toxin is purely bacterial in origin and that the living bacteria with their end product not the putrefactive products nor chemical poisons are directly responsible for the profound symptoms and death."

Stone and Bernheim and Whipple, also Davis, from their results of experiments on dogs, believe that death after obstruction is due to the absorption of toxin secreted by the intestinal mucosa and that this toxic secretion can be derived from the intestinal wall without there being a demonstrable change in the intestinal mucosa. Stone, Bernheim and Whipple undertook by a series of most interesting experiments, to ascertain whether this toxic substance was bacterial in origin or whether it had its origin within the intestinal mucosa. By washing the obstructed loops with a 4 per cent. solution of sodium fluorid the mucosa was practically entirely destroyed, but the bacterial growth was unchecked. The contents of these loops injected into normal dogs failed to produce typical symptoms of ileus. Again, repeated experiments in which the mucosa of the closed loops were carefully washed, then scraped off and allowed to autolyse in normal salt solution in a thermostat for twenty-four hours and injected intravenously into healthy dogs, produced evidence of loop intoxication. In other words the toxin not only is present in the lumen of the bowels but in the cells of mucosa as well. They then drained the closed loops by bringing them to the surface of the duodenum and found that many of the dogs died within five to eleven days. The mucosa of these drained loops were found to contain the toxic material. These experiments were checked by treating the mucosa of the same part of the intestine in unobstructed dogs in a similar way, and found, when injected into healthy dogs to produce no symptoms.

Many theories have been advanced to explain the presence of this toxin in the cells of the mucosa, as disturbed neurotrophic control, absence of normal mobility of the bowel wall, altered interaction of the various ferments and enzymes, but Stone, Bernheim and Whipple conclude that "Under obstruction conditions, there occurs a perversion of the physiology of the mucosa that leads to a retention or elaboration of toxin within its cells and from this source comes the systemic absorption and intoxication." It would seem that this fact has a very great clinical value to surgeons. Many

of us have seen patients die after their obstruction was relieved and enterostomy performed. May it not be due to a continued absorption of toxin within the mucosa itself?

The question as to what part the interference with circulation of the gut plays in producing death in obstruction has also been studied extensively. Murphy and Vincent did some interesting work along this line. They produced venous obstruction of the occluded loop by ligating all of its mesenteric veins. In other cats they produced total anemia of the obstructed loops by ligating both arteries and veins of the mesentery. The cats with venous obstruction all showed early typical symptoms of acute ileus as nausea, vomiting, loss of muscular tone, subnormal temperature, pulse weak, respiration rapid and shallow. These cats all died within twenty-four hours. The postmortem of these cases of venous obstruction showed the occluded loops distended, its peritoneum had lost its luster, color dark purple, abdomen contained 6 to 10 c.c. of clear bloody fluid.

The postmortem in total anemia loops showed gangrenous intestine and general peritonitis. The contents of the obstructed loops in each of the above, when injected into the peritoneal cavities of healthy dogs, produced fatal results. They then injected 30 c.c. of this same fluid into the jejunum of a healthy cat and with no ill effects. But when the same amount of this fluid was injected into the jejunum of a cat, which had just previously had its terminal ileum obstructed, the animal died at about the same time and with the same symptoms as one with high obstruction. From this they deduct the following clinical application:

1. Since this toxic material is not absorbed by normal mucosa, enterostomy for permanent drainage is futile.

2. In cases where damage to the obstructed gut is sufficient to prevent peristalsis, the gut should be resected to prevent further absorption. This is in accord with the views of Lennander, who says that distention of the gut is due to action of the toxin on the plexus of Auerbach which paralyzes the muscular coat and permits the toxins to penetrate to the serous coat. Again he says that it is also obvious that the peristalsis of the gut musculature must be greatly interfered with by infiltrations and edema.

This résumé of experimental work in obstruction would certainly not be complete if we failed to review the brilliant work of Hartwell and Hognet which they did in 1912. These experiments were conducted to ascertain what rôle the dehydration of the tissues played as a contributing cause of death in intestinal obstruction. They noted that postmortem of dogs



dying of intestinal obstruction showed the kidney and liver pathology to be the same as that found in various toxic conditions. They also observed that not only were dogs with obstruction deprived of all nutritive material, but also of all water, since all they swallowed was immediately vomited. They, therefore, performed the following most interesting experiments and I beg your indulgence while I repeat them in detail:

"A bitch weighing 11.3 kg. had a clamp applied on lower duodenum March 13. April 3, when in excellent condition, she was again etherized and the abdomen was opened. The obstruction was found to be complete. The clamp was removed and she is still alive. Total vomitus in the twenty-one days, 6,640 c.c. and she received to offset this 8,250 c.c. normal saline solution by hypodermoclysis. Much of the vomitus had to be obtained by the stomach tube, as the stomach became dilated and would not empty itself. She lost 3 kg. in weight. The urine gave most interesting study. During first week it showed marked abnormalities. Albumen content was as high as 4.5 gm. a day, and total nitrogen exclusive of this was on an average 5 gm. The creatinin creatin ratio was about one to two instead of ten to one, which is near normal for starving dogs. During this week vomitus equals 1,870 c.c., which was 120 c.c. more than saline solution administered. The urine equals 890 c.c., so there was a loss in water equal to one-tenth of body weight. The animal's condition during this week was only fair. After the seventh day the saline was increased 550 c.c. daily and maintained there or higher for several days. The abnormalities in urine entirely disappeared and it became the urine of a dog under normal starvation, except that it contained bile throughout. There was coincident improvement in her condition. Later, on the sixteenth day, when the vomiting had ceased and the stomach tube recovered very small amounts, the saline was again decreased 200 c.c. or less and the dog remained well and the urine continued normal."

Similar experiments were carried out on two other dogs, and they all received normal salt solution to about 100 c.c. in excess of daily output which often reached 500 to 700 a day. These dogs all lived three weeks and were in good condition and apparently would have succumbed only to starvation if the experiments had been continued. Similar experiments were performed on nine other dogs, except that they received 150 to 200 c.c. normal saline a day and no dog lived longer than ten days. In these experiments no injury was done to the intestinal wall where the clamps were applied. In one case where the clamp was applied too tightly the dog died the fifth day. Postmortem showed

the clamp had produced gangrene of the intestine, but the peritoneum was normal throughout, there being no evidence of peritonitis. From the amount of saline solution given these dogs, the investigators conclude that a small man suffering from a similar malady would require 5 to 10 liters a day. The value of the clinical deductions from these experiments cannot be emphasized too much, since in them we see most valuable aid in the treatment of our cases of obstruction in man. Clinically we are not especially concerned with a hair splitting diagnosis as to whether death is the result of a toxin of bacterial origin or whether the toxin is chemical and originates within the intestinal mucosa. But we are vitally concerned about the *modus operandi* of getting our patients well who suffer from intestinal obstruction. We therefore wish to draw the following conclusions:

1. That the pathology of dogs in intestinal obstruction shows dilatation of gut above the obstruction with edema and redness, particularly of mucosa, of duodenum and upper jejunum. There may be gangrene if circulation is sufficiently interfered with.
2. The kidneys, liver, pancreas and sometimes spleen show typical pathology of severe toxemia.
3. The toxin producing death probably originates within the mucosa of the affected loop and that bacterial activity or their end products probably are contributing factors.
4. That the life of these animals in uncomplicated intestinal obstruction can be prolonged by giving normal salt solution in excess of amount of liquids vomited and urine secreted which usually amounts to one-tenth body weight.
5. The longer the obstruction exists the more serious the pathology produced and the graver the prognosis.

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INFLUENZA IN CHILDREN IN ST. LOUIS

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It is to be regretted that on account of the war we were so short of physicians last winter. Such a splendid opportunity was offered to study intensively an interesting and serious epidemic! But we were compelled to hurry in alleviating pain and distress and science had to yield to humanity. Still a few facts were gathered and a few clinical impressions were obtained, and these I wish to record.

The epidemic began about October 15, 1918, and was clearly imported from the East. My own first cases were in families who had just returned from Philadelphia. The disease at first spread slowly and the adult seemed to be the carrier, but about October 30 children began to be the disseminators. The child going to school brought the disease home. The drastic measures adopted by the St. Louis Health Department, closure of schools and stopping of other public gatherings, made a strong impression on the dissemination of the disease but did not eradicate it. As soon as public assemblies were permitted the disease spread again. The incidence of my own cases are represented in a curve (Fig. 1), and this I think corresponds closely with the epidemic curve of the total cases reported in the city.

The variation in the height of the curve was due to the fact that children in different parts of the city were affected. The first two peaks are made up of children in both the West End and South Side districts. The third peak was produced by an epidemic in the suburban towns (Brentmoor, University City, Park View). The fourth peak was caused by an epidemic on the South Side (around Tower Grove Park). The fifth peak represents a severe outbreak that occurred in the Hamilton School district (Hamilton and Westminster). No doubt other physicians in other parts of the city have encountered similar epidemics around certain school districts. The school is undoubtedly one of the most potent centers of distributing the influenza virus and the disease in this respect

resembles measles. When influenza was introduced into a home all the children were invariably affected unless a very prompt and rigid isolation was instituted. One boy of 8 years and one girl of 13 years in two families entirely escaped although they constantly mingled with other members of the family who were sick.

The impression was gained that contact infection is fully as important as infection through inhalation. Every sick child has his fingers infected and if he touches the hand of a well child the poison is conveyed to the other. Children notoriously put their fingers into their nostrils or mouth constantly. No meteorologic data were gathered. The weather that winter was exceptionally warm and dry with plenty of sunshine. Perhaps these factors had some influence in making the epidemic less virulent in St. Louis than in other cities.

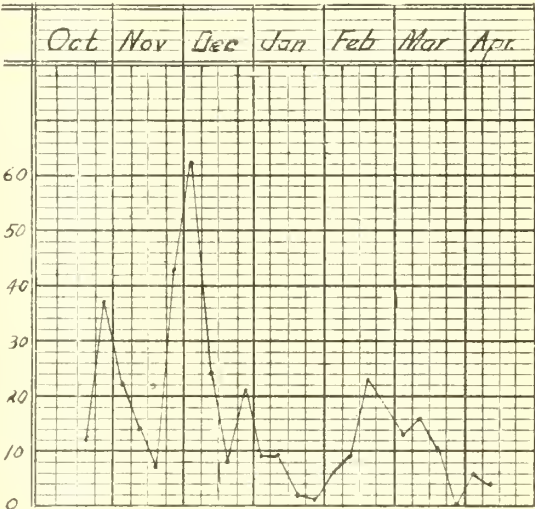


Fig. 1.

Altogether I treated 340 cases in which the diagnosis of influenza was made. The ages of these children are represented in another curve (Fig. 2). It is interesting to note that children between 5 and 7 are most susceptible. Children over 10 years of age like adults are often immune. High school pupils more often escaped than children in the primary grades. On the other hand infants at the breast were generally but not always immune. Artificially fed infants rarely failed to acquire the disease when other members of the family were affected. Certain families seemed to be entirely immune. In several families by prompt isolation the disease was limited to one or two members.

Between the second and third peaks there was a large number of cases of common grip. Many of these resembled influenza. This grip, outside of the influenza, had three different phases this winter: (1) During September and October there occurred many cases of the



autumn "colds." (2) During December, January and February we had quite an epidemic of common grip (pneumococcus), the clinical features of which will be discussed under diagnosis. (3) During March another form of grip appeared, characterized especially by the involvement of the tonsils and adenoids (streptococcus).

*Clinical Features.* As a rule the disease commenced suddenly, the temperature rose to 102 to 104 or even higher, but hyperpyrexia was not observed. The fever in general did not seem to be as high as in other epidemics of so-called influenza in previous years. Only one case of convulsions with undoubted influenza was observed. Vomiting was very frequent, however; many children had protracted vomiting

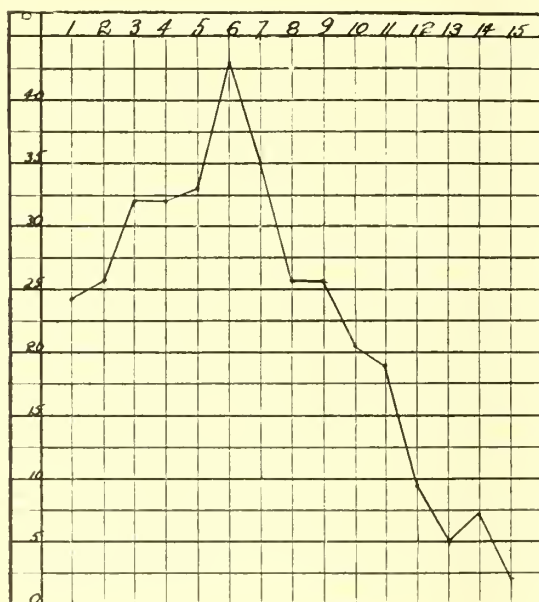


Fig. 2.

lasting from one to three days. Diarrhea occurred in about 5 per cent. of the cases.

The fever was irregular in type and did not resemble in any way the typical fever curve which occurred in an epidemic of influenza that I reported in 1908 (*St. Louis Courier of Medicine*); most commonly the fever lasted three or four days. Many children however had fever only one night; several showed marked febrile movement for more than a week even when no demonstrable lung lesion was present. Recrudescences and relapses were very common but second attacks are rare. The pulse was not rapid, usually slower than one would expect from the fever present. Bradycardia after the febrile movement declined was the rule, and in this respect the disease also resembles measles. This slowing of the pulse often persisted for several weeks.

The respirations too were not hurried or only slightly increased above the normal. Only when considerable pulmonic involvement took place would the respirations rise to forty to fifty per minute.

Prostration occurred in more than half of the cases. Many children however continued to play with their toys during the day in spite of the fever.

A stuffiness of the nose was the first striking symptom. Usually there was little discharge; sometimes a serous discharge was noticed which irritated the skin of the upper lip. The discharge was never purulent.

An intense pharyngitis occurred in so many cases. Pharyngitis lateralis sometimes was a striking feature.

The tonsils were uniformly free from any marked inflammatory change. No exudates were observed. Even that horse-shoe shaped redness of the fauces, the congestion of the anterior pillars, to which we had attributed so much importance in a diagnostic way, was conspicuous by its absence in the majority of cases.

The skin in severe cases showed a tendency to an erythematous blush. This was especially true on the face. No marked exanthem was noticed, except in one child who had a typical scarlatin rash and which I believe was scarlet fever combined with influenza.

R. D., aged 6 years, girl, was taken sick November 2 with influenza. Her brother had the disease a few days before. No unusual symptoms appeared until the third day, when a scarlatinaform rash appeared on the arm and chest. This spread all over the body and had all the recognized signs of scarlet fever. The throat was very much congested but no exudate appeared on the tonsil. The tongue had the appearance of an influenza tongue. The temperature rose to 104 F. after the appearance of the rash and on the second day the physical signs of a pneumonia in the right lower lobe were evident. No marked cyanosis appeared but the child died on the fourth day of the disease with the symptoms of malignant scarlet fever.

The tendency to hemorrhage was shown in the many cases of epistaxis encountered—about 30 per cent. of the cases. This seemed to be a favorable symptom; many times a severe headache or a fever disappeared with the occurrence of nose hemorrhage. Pulmonary hemorrhage did not occur. Hematuria was not observed. An interesting case was that of a severe and almost fatal intestinal hemorrhage.

W. P., aged 2 years, was taken ill with two other members of the family on March 1. The disease was moderate in severity, but distinct areas of bronchopneumonia were observed on the fifth day. The temperature was high, 102 to 103 F. No cyanosis was present but the skin had a dusky hue. On March 6 the child became exceedingly restless and Dr. Samuel T. Bassett was called in an emergency. He found the child pale and almost exsanguinated. The baby had several motions consisting of almost pure blood. He injected thromboplastin at once hypodermatically.

The injection was repeated several times. One mil was given every six hours. Twelve hours after the first injection the hemorrhage ceased. The pneumonia cleared up slowly and the patient was discharged March 10.

An exanthem visible on the mucous membrane of the palate was quite common. It consisted of very minute macules very much like that seen in rubella but smaller in size. A congestion of the gums with an exfoliation of the superficial epithelium was observed in a few severe cases. The conjunction showed marked congestion in most cases.

*The influenzal tongue.* The tongue in all the severe cases had a characteristic appearance. This was designated the "Flu" tongue and served more than any one sign in the differentiation of other respiratory infections from true influenza. On the second or third day the tongue became covered with a dirty white or yellowish brown coat. The edges of the tongue were very much congested and the filiform papillae quite prominent. But there was one peculiarity which made the tongue diagnostic, namely, the congested edges of the tongue and swollen papillae had a cyanotic hue, a lilac or purplish appearance. This vividly gave the tongue a singular expression and caused it to differ from the tongue in other diseases (typhoid fever, measles, pneumonia, scarlet fever, common grip). In mild cases this peculiar tongue was not noticeable.

The lips were often dry and had a dusky appearance, but the severe cyanosis so common in adults was observed only once in this series.

A dry, distressing cough almost invariably appeared on the second or third day. Frequently this took the form of a hoarse, brassy cough with attacks of laryngismus. Only in one instance did the croupy symptoms reach an alarming degree of intensity.

Evidence of a bronchitis or bronchiolitis appeared in fully half the cases. The bronchitis did not seem generalized as in the ordinary grip but appeared in patches in various parts of the chest. Bronchial secretion was very scanty and this was one differential sign from ordinary bronchitis.

The disease has no tendency to produce asthma. Quite a number of my children who are subject to asthmatic attacks had the influenza but no bronchial spasm resulted. Infants did not have that suffocative catarrh so frequent in common grip; a valuable differential sign.

*Influenzal pneumonia.* From the study of these cases the conclusion is drawn that the first site of infection is usually the nose or pharynx. From this location the inflammation spreads downward into the larynx, trachea and bronchial tubes. Fortunately, in most children an immunity is established before the lung is

involved. Some children seem to lack the resistance, and the inflammation spreads to the alveoli of the lungs. This is evinced by an increase in the respiratory movements and a rise in the temperature. Perhaps a pulmonary infection often occurs but in such small foci that it can not be defined by our methods of physical examination.

In this series of 340 cases pneumonia was diagnosed thirty-eight times. Of these, eighteen cases had large areas of consolidation covering the greater part of one or two lobes (lobar type). The lobular type was represented by twenty cases, in which one or more areas of diminished breathing associated with the subcrepitant r le was discovered. The areas of consolidation in the lobar type of the disease had this peculiarity, that marked dullness in percussion was very rare. The wooden sound, to use Dr. Glasgow's term, was noticed several times. The consolidation was best determined by the alteration in the breath sounds (bronchial breathing and bronchophony). I could not make out that this bronchial breathing differed in the pitch of the expiratory sound, as was claimed by Dr. Glasgow, from that of croupous pneumonia.

The consolidated areas as a rule persisted for some time after the child was well, one to two weeks being common. In one infant a consolidated area is still present two months after the acute attack; but the infant is gaining in weight and the roentgen ray shows no suspicious signs of tubercle. By means of the roentgen ray a peribronchial thickening was demonstrated in two cases, which still persisted three months after the acute illness. No doubt more of this condition occurs than is indicated by these figures.

*The blood.* Only a few cases were studied. The blood often shows a leukopenia and a relative increase in the lymphocytes. The polymorphonuclear cells seem to be poisoned by the influenza virus.

*The urine.* Several severe cases showed a slight albuminuria. No nephritis nor hematuria was encountered.

*Mortality.* Of the 340 cases treated two died. One, as reported above, was apparently associated with scarlet fever and to this disease was ascribed the fatal termination. The other case was seen only two hours before death.

*Diagnosis.* The great difficulty in the diagnosis of influenza lies in the fact that children are subject annually during the winter months to respiratory infections which symptomatically are very similar to influenza. We have first the autumn "colds" arising about the time that frost appears becoming epidemic in October and November and appearing in sporadic cases throughout the winter. Then every year about



Christmas time our annual grip epidemic begins, sometimes quite severe, producing fever, coryza, bronchitis, and bronchopneumonia. In February and March another epidemic begins complicated with croupous pneumonia, otitis media, and tonsillitis.

At least three types of this respiratory infection are well known. By common consent all acute respiratory infections occurring epidemically are designated "grip," to which this year we have affixed the adjective "common." We were compelled to differentiate at the bedside common grip from the Spanish influenza. This has been very difficult at times. Coincident with and immediately following the second epidemic, during December, January and February, numerous cases of common grip were observed. The principal characters which aided in the diagnosis were as follows:

	Common Grip	Influenza
Incubation	....5 to 10 days.....	1 to 3 days
Prostration	...Slight .....	Severe
Nose	.....Marked discharge..	Slight
Tongue	.....Not characteristic..	Characteristic
Bronchi.	.....Moist râles.....	Dry râles
Expectoration..	Profuse .....	Slight
Expectoration..	Purulent .....	Mucous
Susceptibility..	Infants very suscep-	Infants less sus-
	tible .....	ceptible
Susceptibility..	Adults immune.....	Not immune
Eyes.	.....Often purulent....	No pus

The fact that the influenza virus does not produce a purulent secretion is a valuable sign. Whenever pus came from the eyes or nose I excluded influenza. Often we had to wait for other members of the family to contract the disease before deciding the question. Sporadic cases of influenza could rarely be positively recognized. We could not depend on the blood count in mild cases.

*Prophylaxis.* The closing of the schools during an influenza epidemic is a powerful preventive measure. My own figures seem to show that the young children are more susceptible than older children. It is wise therefore to exclude children under eight years of age from school during an epidemic.

I did not use the mixed vaccine as a prophylactic, principally because the disease has not a high mortality in children and we know too little about the immunizing effect of the vaccines which have been prepared. Strict isolation succeeded in several families in limiting the number to a single case.

The internal administration of drugs, quinin, sodium benzoate, and Lugol's solution, occasionally seemed successful in preventing the disease; nasal douches and antiseptics were not used since their effect is evanescent and the removal of the protecting coat of mucous must not be regarded as harmless. It might do no harm

however to use some alkaline antiseptic with an atomizer when the child returns from school which is known to harbor influenza carriers. The use of a mask is not practicable with children. Care should be taken that the hands are washed at once when they arrive home from school.

In the family strict isolation of the patient and attendant is often successful in preventing other members from taking the disease.

*Treatment.* Having been a student of Dr. W. C. Glasgow, I was taught that benzoate of soda is an efficient remedy against influenza. I am sure no other drug does any more good and it does no harm. Therefore this chemical was prescribed more than any other. As there is a marked tendency to acidosis it was thought advisable to add an alkali, either sodium bicarbonate or potassium citrate. The great injury to the red blood corpuscles in the severe influenzal infections suggested that the potassium salts might be serviceable. Hence I ordered some potassium salts several times a day. The usual prescription, for a child of 5 years, was as follows:

Sodii benzoat 4; Potas. citrat. 4; Elix. digestiv comp. 30; Aquae q.s. ad 60.

M. Sig. Teaspoonful every two hours in water.

I believe this mixture is safe and as efficacious as any other.

Aspirin, acetphenetidin and antipyrine were not often prescribed. While these drugs relieve the symptoms, I feel convinced that they also inhibit those physiologic processes which must be active in the production of antibodies. One dose of aspirin in the evening was allowed in a few cases. As a rule, quinine was prescribed in the severe cases and seemed to be of service in lowering the temperature. Intramuscular injections of quinine was used in two cases. For the distressing cough, paregoric or codein was occasionally prescribed.

In all children showing considerable prostration camphor was used as a stimulant. It was generally prescribed in the form of spirits of camphor, and five to fifteen drops diluted with milk were administered several times a day. In a few cases the neutral camphor in oil was given hypodermatically. Coffee and tea also were frequently used as stimulants. In one serious case of pneumonia the principal stimulant was caffeine given hypodermatically.

The treatment of these cases was guided by the theory that the child had to produce certain antibodies. For this purpose it needed rest, fresh air, food and light. So we kept our patients in bed and let them sleep as much as possible. During the day however light was permitted in room.

Fresh air is necessary, but not cold air. I believe no greater mistake has ever been fostered by the profession than the theory that cold air is beneficial in respiratory infections of children. So the heat was turned on but a window kept partly open. The temperature of the room in day time was 70 to 80 F., at night not lower than 65 F. A room temperature that is uncomfortable for the nurse is not good for a sick child suffering from any acute respiratory disease including influenza. This conclusion has been reached after careful clinical observation. The child must be made as comfortable as possible.

We permitted only one patient in one room. When several patients were sick in the same family, each was put in a separate room. This is one thing which is very necessary and has a great advantage over the ward in a hospital. In fact, I must insist that children suffering from influenza should not be sent to a hospital. They do much better and the mortality is much lower in the home.

Since certain physiologic processes are under great strain, food is necessary. The patients were not only given food, they were coaxed to take more. Only when vomiting was severe was any special restriction placed on the diet. We gave the children what they liked. True, the food had to be restricted to a liquid or a soft diet, but if the patient was strong enough to chew, bread, potatoes, fruit and vegetables were given. There was no trouble in the resistance of the child when a good nutrition could be maintained.

Daily sponges with comfortably warm water were beneficial. A cold compress to the head for headache did no harm. Occasionally, sponging was resorted to for the purpose of lowering the temperature, but the fever was not interfered with unless very high.

I did not use vaccine. In one serious case of pneumonia two doses of pneumonia phylacogen were injected. In another child just as sick none was given. Both recovered.

The treatment of influenza pneumonia differed in no way from the treatment of the cases of influenza, except that the dose of camphor was increased and quinin was more often prescribed. As a rule, a counter irritant was used twice a day over the affected lung. This consisted of mustard papers, mustard plasters, or capsicum vaseline.

No poisonous drug (digitalis, morphin, chloral, strychnin) was prescribed.

In conclusion, it may be stated that the treatment of influenza of children in the home is very satisfactory and is accompanied by a low mortality.

4435 West Pine Boulevard.

# INFLUENZA PNEUMONIA AT BARNES HOSPITAL OCTOBER, 1918, TO MARCH 6, 1919\*

R. LESTER MURDOCK, M.D.

AND

JAMES R. DEAN, M.D.

ST. LOUIS

Four hundred and ten cases of influenza were admitted to Barnes Hospital from the onset of the epidemic in the latter part of September, 1918, to March 6, 1919. Pneumonia occurred in seventy-one of the cases. The patients came in order of the greatest number from the civilian population of St. Louis, from the Students' Army Training Corps of Washington University, and from the nursing and intern staff and employees of the hospital. The greatest number of admissions to the hospital was in the month of November. Fifty-nine per cent. of the influenza pneumonia cases had pneumonia when admitted to the hospital. Forty-one per cent. developed pneumonia while in the hospital for influenza. The clinical diagnosis was bronchopneumonia in all cases, the process being widespread in many. The main facts are shown in the table.

TABLE 1

	Number	Per Cent.
Total cases of influenza.....	410	....
Total deaths .....	27	6.6
Total number developing pneumonia.....	71	17.3
Total deaths among pneumonia patients.....	27	38.1
Total number of patients developing pneumonia while in the hospital for influenza.....	29	41.0
Total number of patients admitted with frank pneumonia .....	42	59.0
Total deaths among patients admitted with frank pneumonia .....	17	40.5
Total deaths among patients developing pneumonia while in the hospital.....	10	34.5
Total number of nurses in training.....	141	....
Total number of nurses admitted.....	57	40.4
Total number of nurses developing pneumonia	1	1.8
Total deaths .....	0	0

The occurrence of only one case of pneumonia among fifty-seven nurses admitted to the hospital with influenza, or a percentage of 1.8 per cent., contrasts with the much greater occurrence of pneumonia among influenza cases from the outside. The percentage of occurrence of pneumonia in the total number of cases of influenza was 17.3 per cent. The probable explanation is to be found in the fact that the nurses were put to bed immediately at the onset of symptoms. This points clearly to the importance of early rest in bed in the treatment of influenza. There were no fatalities among the 57 nurses admitted with influenza. There were 10 cases of influenza among the 23 physicians of the house staff of the hospital. Pneumonia occurred in 1 of these 10 cases and ended fatally. The patient, a vigorous and robust young man, had a temperature of 1 to 3 degrees above normal, with cough, for two days but con-

\* From the Department of Internal Medicine, Washington University Medical School and Barnes Hospital.



tinued up and about and did not go to bed until the third day of the disease.

*Signs, symptoms and laboratory findings.*—The history in most of the cases was one of sudden onset of influenza. Symptoms and signs of pneumonia became evident during the course of the influenza, with one or two exceptions. These signs and symptoms were fever, cough, and pain in the chest. Cough in 40 per cent. of the cases was accompanied by sputum which varied from a blood streaked mucoid and tenacious material to a frothy, serous, pink-tinged sputum; in some cases very bloody serous sputum was brought up. The typically rusty sputum of lobar pneumonia was not seen.

The temperature varied from 101 F. to 106 F., some cases showing a constant elevation while others had a tendency to drop irregularly. The average duration of the pneumonia fever was 11.1 days. The maximum durations of fever were 39 and 31 days in 2 cases developing empyema; the minimum duration of a case was 3 days. The duration of the greatest number of cases was from 7 to 9 days. Two cases died in 3 days; several others in 4 to 5 days. One case ended fatally after surviving 12 days.

The longest duration of an uncomplicated case of pneumonia was 26 days. Roentgen ray showed a dense shadow in the right upper from the right clavicle extending down to the hilus like a wedge with the base out. Physical signs of consolidation were present in different examinations over parts of the right supra-scapular and right infraclavicular regions for about sixteen days. During this time the patient was quite sick, but afterwards was up in a wheel chair considerably, though temperature rose above 100 F. daily until the twenty-fourth day. Repeated sputum examinations failed to show tuberculosis; neoplasm of lung was considered. Observation of the patient during the ensuing seven months has confirmed the case as one of pneumonia with delayed resolution but final recovery.

The highest temperature recorded was 108.4 F.—in a fatal case. The highest temperature in a case which recovered was 106. The maximum pulse recorded was 170; the maximum in a case to recover was 145 per minute. The pulse ranged usually from 100 to 140; respiration from normal to 40 or 50. Forty-two, or 59 per cent. of the cases, showed evidence of an acute renal irritation. The great majority showed a leukopenia, but the average white blood count for the entire series was 8,700. The blood pressure was normal or 10 to 15 mm. mercury below.

Cyanosis was one of the remarkable features of the disease. In those cases in which progressive involvement of the respiratory apparatus became the chief condition, a very slight cyanosis, perhaps showing best in the finger nails,

lips or ears, was often noticed early. The next day moderate cyanosis might be present with finger tips violet but hands and feet warm and dry. Later, extreme cyanosis was present with extremities cold and patient very dyspneic. In the far advanced cases of pneumonia there was usually a tint of ashen pallor of the skin in general with the extremities and parts of the face showing bluer. The skin then was damp and cold. In one case, observed ten minutes before death, this marked cyanosis lessened until the patient was very pale and death occurred from respiratory failure.

In other cases the cyanosis showed no regularity. A patient might be seen to become suddenly very cyanotic with rapid, weak pulse, and on examination five or ten minutes later be only slightly cyanotic. One such case later had marked cyanosis with the extremities cold and skin clammy, and died of cardiac failure. Extreme cyanosis occurred sometimes in cases which later recovered. The cyanosis cleared up in one case on breathing oxygen for a few minutes, but returned as soon as the oxygen was stopped. In another case the cyanosis was not improved after fifteen minutes of oxygen and  $\frac{1}{75}$  grain of atropin.

It is difficult to say whether a given symptom is due to the pneumonia or the influenza preceding. The symptoms most frequently noted in the hospital records here in order of frequency are: cough, headache, general aches and pains in joints and back, chill and sore throat. Chill occurred at onset in 26 per cent. of the cases. The signs most often noted were in injected pharynx, tonsils, pillars, and soft palate, flushing of the face and conjunctivitis.

The physical signs in the lungs varied from only an impairment of resonance and diminution of vesicular breathing with showers of fine crepitant râles to frank signs of consolidation: tubular breathing, whispered and spoken bronchophony and large and small moist râles. The extent of lung involved was but a small patch at first, later a part of the lobe, an entire lobe, or the greater part of one or both lungs being involved.

The most frequent site of the signs was in the interscapular areas of the bases posteriorly. In those cases ending fatally there were the signs of marked edema of the lungs, sometimes resulting fatally in a few hours, sometimes not for several days.

Herpes labialis was noted in 4 cases; considerable nose bleed in 8 cases; laryngitis in 5 cases.

*Complications.*—Complications and associated diagnoses were: Acute fibrinous pleurisy, 9 cases; acute suppurative pleurisy, 4; serofibrinous pleurisy, 2; pericarditis, acute, 1; pericarditis with effusion, 1; acute infectious arthritis, 1; otitis media, acute catarrhal, 2; acute bronchitis, 55; acute laryngitis, 5; acute nephritis,

12; idiopathic tachycardia, 1; chronic appendicitis, 2; sinusitis, 1.

Nose and throat examinations in a number of cases resulted in a diagnosis of sinusitis in only one case, ethmoidal and sphenoidal sinusitis in a convalescent.

**Mortality.**—The number of deaths was 27, or a mortality of 38.1 per cent. of pneumonias. Patients admitted with pneumonia, often in very serious condition, showed a higher mortality, 40.5 per cent., than those who developed pneumonia while in the hospital, 34.5 per cent. The greatest number of deaths occurred with onset of influenza about the last week in November. This corresponds to the number of hospital admissions (19 in October, 37 in November, 12 in December, etc.).

Six of 9 cases complicated by pregnancy died. Of the 3 women who recovered, 1 miscarried at 6 months, 1 had a living child and the other had a normal pregnancy at 4 months. In the 6 fatal cases, a normal birth of a living child occurred in 1 case, 1 premature baby was saved by incubation, 1 woman was delivered outside the hospital and no information could be obtained as to the baby. Cæsarian section immediately on death of the mother failed to save one baby. In the other fatalities the fetuses were under the age of viability.

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#### RADIOLOGICAL FINDINGS IN INFLUENZA AND PNEUMONIA\*

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The roentgen-ray findings of the chest in cases of influenza and complications of this condition present a number of features of particular interest. During the influenza epidemic and subsequently there have been 411 cases of influenza in Barnes Hospital. Seventy-one cases of pneumonia and fifteen cases of pleurisy occurred complicating the influenza. Roentgen-ray examinations were made in sixty cases with complications. This paper is based on selected material from this lot. Very few stereoscopic or fluoroscopic examinations were made, and these features will not be considered here. The roentgen ray was of use in confirming the physical findings and in directing attention to some overlooked pathological conditions within the chest. The difficulty in reproducing the details of a chest plate must be borne in mind in observing the accompanying prints.

**Uncomplicated influenza.**—In the uncomplicated cases of influenza there were found an enlargement of the hilar shadows and an in-

crease in their density. The parenchyma of the lung was unaffected. This enlargement of the hilar shadows is due chiefly to enlargement of the mediastinal glands. In the cases of bronchopneumonia which came to necropsy these glands on both sides of the chest were found greatly enlarged due to edema and round cell infiltration. This was the case regardless of whether the pneumonia was present in one or both lungs.

**Pleural affection.**—Fifteen cases of pleurisy and empyema were met with. Some of these were serofibrinous from the outset and promptly became purulent; others were bronchopneumonias, later followed by empyema. There was nothing of peculiar interest about the plates from purulent pleurisy in this series of cases. In empyema the plate was much like that found in serofibrinous pleurisy except that the upper line of the dense area was found less apt to ascend in the outer region. In these cases any part of the pleura might be affected; however, the lower was most frequent.

In serofibrinous pleurisy the effusion showed as a uniformly dense area, the density being largely dependent on the amount of fluid present. This was located in the lower portion of the chest cavity usually. The upper line of the opacity ascended as the lateral chest wall was approached. The costophrenic angle was obliterated. No lung markings were recognizable within the dense patches as a rule. In encapsulated pleural effusions the opaque area might be toward the top of the cavity, as in one case, very high in the right axilla.

In one instance of acute fibrinous pleurisy there was a small opacity shown in the plate at a site corresponding to the seat of pain and the point where the pleural friction rub was heard. The opacity was located in the right upper middle outer region, somewhat coarsely mottled, the whole area only slightly increased in density.

Usually the density of the pleura in suppurative pleurisy as shown on the plate receded very slowly with improvement in the patient's condition. In two instances, however, this recession of density was quite complete. Case 5292 was admitted to the hospital two months after the onset of influenza which had been followed by pneumonia. On admission an empyema was found and the patient promptly operated. Three weeks later a plate was made to determine the extent of the discharging sinus (Fig. 1). This shows a slight increase in opacity, ill defined, in the lower half of the right chest, with a few scattered minute areas of greatly increased density due to some bismuth which had been injected. At the extreme right lower is a black patch produced by the larger mass of bismuth. Evidently the pathological change in the pleura at this time was slight.

\* From the Department of Internal Medicine, Washington University Medical School and Barnes Hospital.



The recovery of the pleura in this case was prompt and marked. Case 5174 was admitted to the hospital two months after being operated for suppurative pleurisy. Figure 2, from this

chophony, subcrepitant râles frequently in great number, and piping râles. The area over which these signs are obtained does not extend to the base and often not to the spine. Such a finding

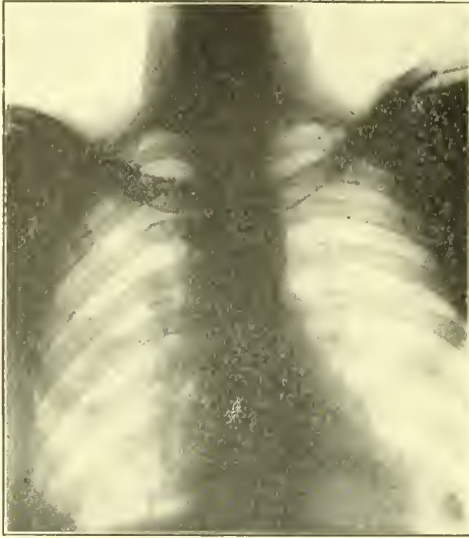


Fig. 1.—Convalescent empyema right lower. Some increase in density, ill defined, right lower half. Black patch extreme right lower, bismuth.

case, shows nothing abnormal except a little thickening along the course of the resected portion of the excised rib. Practically a complete recovery of the pleura has occurred.

*Bronchopneumonia.* — Bronchopneumonia is found first, in a great majority of instances, on

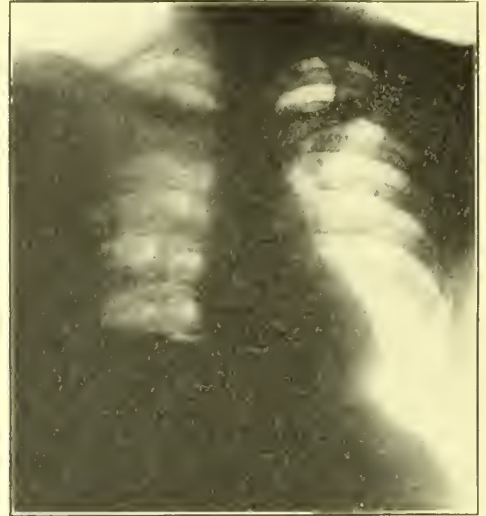


Fig. 3.—Bronchopneumonia, right. Dense patch right upper; mottling right middle and lower.

as the latter is uncommonly met with in cases seen in ordinary times and is so frequent in the pneumonias of influenzal origin that it might be said to be peculiar to this kind of pneumonia. Not uncommonly this area is first seen at the angle of the left scapula. Regardless of which

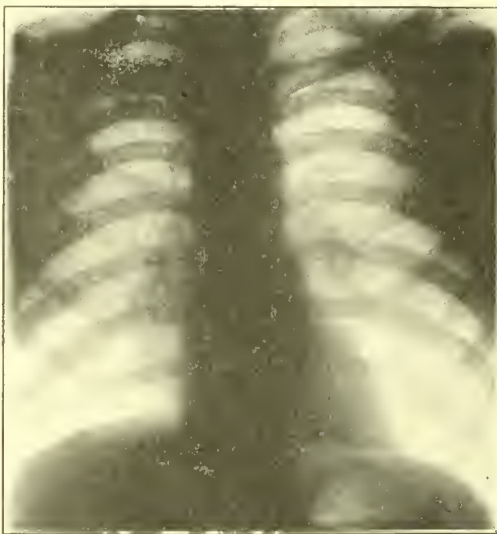


Fig. 2.—Pleural recovery after empyema on right.



Fig. 4.—Bronchopneumonia. Small dense patch angle right scapula; lung clear between patch and diaphragm.

physical examination at the angle of the right scapula. At this point there is found one or all of the following: an impairment of the percussion note, tubular breath sounds, increased whispered voice and spoken voice sounds, bron-

side is first affected, the lesion frequently appears in a day or two on the opposite side. This is always true in the severe fulminating cases. In the milder cases the lesion will not progress much after its first appearance; while in the

fatal ones both sides become extensively involved, and later edema of the lungs occurs.

The chest plate, if made early in the course of the pneumonic lesion, shows a small to moder-

in intensity from one which is discernible with difficulty to one of great opacity throwing almost a white shadow on the plate. The entire area may be only a couple of centimeters in



Fig. 5.—Bronchopneumonia. Patch right middle and lower.

ately large area of increased density in the lower middle region of the right side. The density as a rule is not uniform throughout but is mottled and is evidently the result of the coalescence of numerous small opaque areas varying from a few millimeters to 1 or 2 c.c. in diameter. The area, however, may be fairly uniform with



Fig. 7.—Bronchopneumonia. Same case as Fig. 6, five days later. Right side greatly decreased in density; right diaphragm lower; heart still to right.

diameter or may involve almost half the affected side of the chest. The borders of the densities of moderate extent are not sharply defined but blend into the unaffected portions. As was stated above, the opacity is most frequently

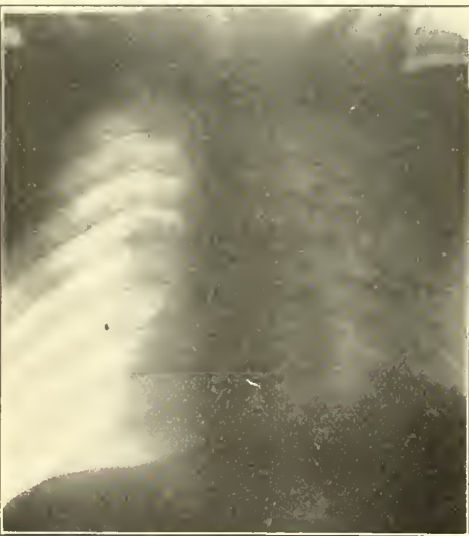


Fig. 6.—Bronchopneumonia. Entire right markedly dense but mottled; right diaphragm elevated; heart in mid-line.

only here and there a small dense patch of 1 to 1.5 c.c. across. Within the opacities of lesser degree the linear markings may be indistinctly seen; in the denser ones the linear opacities are entirely obliterated. The density itself varies

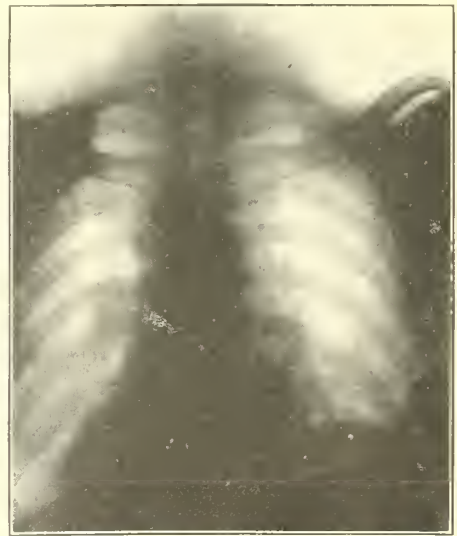


Fig. 8.—Bronchopneumonia. Coarse mottling throughout both lowers; slight elevation right diaphragm; heart mid-line.

seen early on the right side in the lower middle region; however, it may occur first on the left at a corresponding point. In a still smaller number of cases it may occur on both sides in the upper portion. The area is of irregular



shape but tending to be round; often, however, it is a band of moderate width, 2 or 3 cm., extending almost across the chest from the hilus or from the lateral chest wall. Frequently the



Fig. 9.—Bronchopneumonia. Same case as Fig. 8, 2 days later. Mottling much more marked on right; left clearer; right diaphragm much elevated; heart displaced to left.

patch may be pyramidal in shape with the base at the outer wall of the thoracic cavity (Fig. 3).

Another feature of particular interest is the common occurrence of a clear zone between the pneumonic patch and the diaphragm and also the shadow of the heart. In many instances



Fig. 10.—Tuberculosis. Large mottled patch right middle; general increase in density right upper; some mottling right upper and entire left. Heart and mediastinal shadows blurred.

where the lesion is of moderate extent, the relatively unaffected tissues just above the diaphragmatic surface cast no appreciable shadow. This characteristic is present in the area be-

tween the density and the heart and hilus but with less frequency (Figs. 4 and 5).

The hilar opacities are increased in extent and density, and often the pneumonic density is continuous with that of the hilus. Small bronchopneumonic densities may be overlooked if they are located adjacent to the hilus, and, on the other hand, hilar densities may be thought to be pneumonic. In other places, particularly in the region of the scapular angle on either side, small opacities of slight density may be overlooked. This may occur when there is evidence of a grosser lesion on the opposite side or when there is no evidence of other lesions.

In some cases an entire side of the chest will present a markedly dense appearance. There is a faint sprinkling of slightly darker areas producing a mottled effect. The whole shadow is the result of the coalescence of innumerable



Fig. 11.—Tuberculosis. Same case as Fig. 10. Opacities increased in size and density.

almond sized opacities. The process is so extensive that there is considerable resemblance to the plate findings of an extensive empyema. In lesions of somewhat smaller proportions there may be a rather large, dense, patch with a number of almond sized and smaller patches scattered throughout the rest of the pulmonary area of the same side. In a few cases there are no large areas of increased density but a moderate number of almond sized areas in a part of one or both lungs. Such lesions as the latter may show no marked change in percussion note or evidence of consolidation on physical examination (Figs. 6, 7).

When the opacities are adjacent to the hilus or cardiac shadows the cardiac border may be obliterated. Likewise the opacities may obscure the diaphragmatic outline.

In a few cases an unusual and unaccounted for displacement of the shadows of the heart,

the mediastinum, and the diaphragm has occurred. In one case (Case 5024, Figs. 6, 7) the entire right side was the seat of an extensive bronchopneumonia, and the shadows of the parts mentioned were distinctly displaced to this side. A plate made during convalescence showed some readjustment of the diaphragmatic levels, but no marked change in the position of heart and mediastinum. Another case (Case 5425, Figs. 8, 9) of bronchopneumonia which early had only a very moderate affection of discrete pneumonic patches on both sides later showed a more extensive lesion on the right but still discrete in type. The plate made early in the course of the disease showed only a moderate elevation of the right diaphragm; later the right diaphragm was greatly raised. The heart in the latter instance was pushed to the left. It may be said that there was no tympanites in these cases to contribute to the displacements. Partial atelectasis of the affected lung probably accounts for the displacement.

In differentiating influenzal bronchopneumonia from lobar pneumonia, the location of the opacity, for instance, at the angle of the scapula; its mottled appearance and ill defined border; the relatively clear area just above the diaphragm and possibly between the patch and the cardiac shadow, speak for the former. Between bronchopneumonia and pleural effusion, the location, mottled appearance, shape and lesser density indicate pneumonia. Between the plates of certain types of advanced tuberculosis and bronchopneumonia with scattered foci there is very close resemblance, and in many instances it is impossible to differentiate them. Scattered or coalescent opacities of irregular density, size and shape, flaky or linear in character, may be seen in either condition. Hence, great discretion must be exercised in diagnosing tuberculosis in a patient ill with bronchopneumonia or who has had it recently.

*Tuberculosis and influenza.*—The similarity between bronchopneumonia and tuberculosis has just been mentioned. Case 4577 calls this fact to attention. In this case the persistence of bronchitis with signs of pulmonary induration and continued elevation of temperature suggested tuberculosis. Figure 10 was made three weeks after onset of influenza. This shows a rather large mottled opacity in right middle with some general increase of density of right upper. Throughout right upper half and the entire left side, but more particularly the lower half, there is some flaky mottling, coarser in the left lower. Figure 11, made a week later, shows a marked general increase in this mottling, particularly right upper and left lower. The heart and mediastinal outlines are blurred by the hilar and pulmonary shadows in both these plates. While these plates are highly characteristic of tuberculosis, especially Figure 11, at the time the plates were made the evidence was not at all

considered conclusive, the question of bronchopneumonia being raised. This case later had tubercle bacilli in the sputum. Figure 7, previously noted, shows densities which have considerable resemblance to those seen in some cases of tuberculosis. Figure 3 also shows mottling in the right lower, not unlike that of tuberculosis, flaky, ill defined. It can readily be seen that considerable difficulty in diagnosis would be met in cases of this kind should the course of patient's illness bring up a question of tuberculosis.

#### SUMMARY

The following conclusions may be drawn:

1. The roentgen-ray plate of the chest in uncomplicated influenza cases shows an increase in size and density of the hilar shadows.
2. The plate of suppurative pleuritis following influenza does not differ from that seen in empyemas as ordinarily met with.
3. In some instances densities produced by acute fibrinous pleuritis are demonstrable.
4. The plate in bronchopneumonia is usually distinctly different from that of lobar pneumonia, the plate of the former being rather characteristic.
5. Displacement of the heart, mediastinum, diaphragm and liver, may occur in a limited number of cases of bronchopneumonia.
6. One should diagnose tuberculosis with reserve from the roentgen-ray plate in patients recovered recently from influenzal bronchopneumonia.

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#### THE TREATMENT OF HEMORRHOIDS\*

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It is the claim of proctologists that the diagnosis and treatment of conditions about the rectum do not receive sufficient consideration. Mistakes in the diagnosis of rectal conditions have come to my notice so frequently that it seems timely to call attention to some of these errors. There seems to be a tendency to diagnose disorders of the anal and rectal regions by relying on the statements of the patient, or by mere inspection of the parts. Every patient with rectal symptoms should be carefully examined. It is surprising how many cases of syphilis or carcinoma of this region are considered hemorrhoids (due to the lack of adequate examination) until the disease has progressed beyond the stage where the conditions are favorable for a cure. Carcinoma and syphilis of the lower rectum may be easily detected in the early stages by a digital or proctoscopic examination.

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



A diagnosis of hemorrhoids should not be made without at least a digital examination of the rectum. Furthermore, a rectal examination frequently will reveal the cause of many obscure symptoms, hence this region should be carefully explored as a part of every thorough general physical examination.

Every surgeon has his favorite method for operating on hemorrhoids and probably the method usually employed gives the best results in the case of that individual surgeon. While I do not wish to enter into a discussion as to the relative merits of the various types of operations, the clamp and cautery technic has given satisfactory results in my hands for many years.

There seems to be a well fixed idea that an operation for hemorrhoids must be followed by a great amount of postoperative discomfort. It is a well known fact that the cautery operation is the source of great pain if the skin is touched by the cautery. For a number of years I have employed a technic which practically eliminates the pain during convalescence. This is accomplished by incising the mucocutaneous area at the base of the pile, thus severing the sensory nerves which enter the area to be cauterized. The clamp is applied parallel to the long axis of the rectum, with the outer portion of the clamp in the gap resulting from the incision at the base of the pile. The cauterization should proceed slowly, at a low heat in order to coagulate the tissues and the blood thoroughly, leaving a mass of eschared tissue superficial to the clamp. The deeper structures should be protected by an asbestos sheet placed beneath the clamp. Usually three such cauterizations will include all the hemorrhoidal tissue. The clamps are carefully removed, the region inspected, and a loose strip of iodiform gauze inserted, extending above the sphincter. This is not a pack. It serves to help coagulate oozing if present, it prevents adhesions between the opposing abrasions and prevents hidden hemorrhage from collecting in the rectum above the sphincter. The gauze should be removed the day following the operation.

Patients operated on by this method are entirely comfortable after the operation, even slight pain is rare. I do not hesitate to assure my patients that the operation will not be followed by pain. The mucocutaneous incision also prevents edema of the parts.

As to the after results, complications should not be any more frequent than when other methods of operating are used. Complications are frequently the result of improper technic or the failure to carry out proper after-treatment, rather than the fault of the operative method. Hemorrhage should not result if the tissues are cauterized slowly at a low heat so that an ample dry eschar is left attached to the pile area. I have never had such a complication. Scarring and stricture will not result unless too much

tissue has been removed or unless the cauterization is allowed to extend too deeply into the tissues. When the eschar drops off, a healthy granulating surface is left which rapidly covers over with epithelium. Fissures, ulcers, fistula, and infection, are usually the result of improper after-treatment.

While ether anesthesia is usually satisfactory for hemorrhoidal operations, local anesthesia is indicated where there are serious contraindications to general anesthesia. Contrary to general opinion, a complete clamp and cautery operation may be performed under local anesthesia quite satisfactorily. Hirschman, who is a great exponent of local anesthesia in operations for hemorrhoids, states: "The clamp and cautery operation is not applicable, of course, under local anesthesia."\*

It is well to review the nerve supply of the anus and lower rectal region in order to understand the application of local anesthesia properly. The lower rectum and anus are well supplied with sensory nerves. The anal region is supplied with branches from the third, fourth and fifth sacral nerves through the inferior hemorrhoidal nerves. These nerves arise from the pudic nerve under the gluteus maximus muscle. They cross the ischiorectal fossa and give sensory fibers to the perianal cutaneous surface. The lesser sphincterian nerve of Morestin arises from the fifth and sixth sacral nerves and passes down the hollow of the sacrum to the posterior superficial part of the external sphincter. A filament from the internal pudic nerve supplies the anterior part of the sphincter.

By employing the method of Hackenbruch, all of these nerves may be blocked. A large syringe with a needle 3 or 4 inches long is used. One half of 1 per cent. novocain or apophysin, to which one drop of a 1:1000 suprenin preparation is added for each 10 c.c. of the solution, is employed. Four intracutaneous injections are made about 1 inch from the anus. These injections are placed anteriorly, posteriorly and one to each side. A subcutaneous injection is made connecting these four intracutaneous injections, thus surrounding the anus. The finger is inserted into the rectum and the sphincter is thoroughly infiltrated with the solution. Finally, with the finger in the rectum as a guide, injections are made upward around the rectal tube to a depth of 3 inches. About 125 c.c. of the solution is needed for the infiltration. Fifteen to twenty minutes should be allowed to lapse after the injections, before beginning the operation. The nerves to the region will be completely blocked if the technic is good, and the sphincter may be dilated and a complete clamp and cautery operation may be performed, with entire satisfaction to the operator and without discomfort to the patient.

Humboldt Building.

\* Handbook of Diseases of the Rectum, 1913, p. 187.

## CARE OF EYE, EAR, NOSE AND THROAT IN GENERAL PRACTICE\*

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In writing on this subject I do not expect to advance any new methods of treatment, but I have chosen this subject with a hope of creating a new interest in eye, ear, nose and throat conditions which accompany general diseases and which are continually confronting the man in general practice.

The field of general medicine is so large that the physician does not have the time to devote to studying in detail what may seem to be the less important part of the disease with which he has to deal. Then in addition to his lack of time for studying therapeutic measures for these conditions, the attending physician quite frequently does not do nearly as well as he knows with his treatment of eye, ear, nose and throat conditions that accompany general diseases, because his mind is concentrated on the more important pathology and treatment of the disease in hand.

If his case is one of pneumonia his principal line of thought is about the temperature, the heart's action, the amount of lung involvement, shall he give his stimulants early or withhold them until a little later. If his case is typhoid his line of thought is how he can best nourish his patient and at the same time avoid irritating the bowel, what are his resources in case he should get an intestinal hemorrhage, or perhaps he already has such condition to deal with.

And thus it is with most general diseases; the more prominent and more important pathology completely overshadows the condition of the eye, ear, nose and throat.

The proper care of these organs in some cases may mean only an added comfort to your patient. In other cases it may really be the determining factor in the outcome of the case.

There are very few diseases in which the eye, ear, nose and throat are not involved to a certain degree. Either one or more, and frequently all of these organs, usually play some part in the case. Even in a normal labor, which is to be considered a physiological process, the eyes of both mother and child are involved.

There are a few general thoughts that I wish to impress upon you which will apply to practically all diseases. There are very few people but what have some refractive error, though only a certain per cent. have any unpleasant symptoms from the strain as long as the general health is good; but if the vitality is lowered by any disease, these same eyes will produce unpleasant symptoms and must have special care. For instance Mr. H, aged 25, is far-

sighted to the extent of two diopters. He has always been well and vigorous, sees well, has no headache, does not wear glasses and feels no need of glasses. He sees well without glasses because his muscles are strong and the chrysaline lense is pliable. He is able to strain the two diopters without very much if any fatigue. He has an attack of pneumonia and is in bed three weeks. While convalescing he tries to read and finds that after reading a short while he cannot see unless he holds the paper at arm's length.

What has happened to his eyes? He says he never had any trouble with them before. Is he more far-sighted than he was before he had pneumonia? No. Upon test, his eyes will be found nearly or quite the same—hyperopic two diopters. The pneumonia has not increased his hyperopia but it has lowered his vitality and he is now unable to overcome the refractive error as he was when he was strong and robust.

If this man persists in using his eyes he will in all probability do them an irreparable injury. A person who is sick should be instructed to use their eyes as little as possible, and to guard them for a considerable time after apparent recovery. It is sometimes necessary to order glasses to correct this latent hyperopia, or hyperopic astigmatism, which previous to the attack gave no trouble. After full recovery the patient may be able to lay aside his glasses or he may not be; this will be a case of individuality and should be governed by the advice of the ophthalmologist. It is not altogether a question of how much refractive error there is present but what symptoms does the existing error produce. Some people have power to overcome a hyperopia of one and a half or two diopters easier than someone else can overcome a half or three quarters of a diopter.

The exanthemata especially are almost sure to affect the eyes, perhaps measles most of all. As you know, one of the first symptoms of measles will be a conjunctivitis and photophobia. In smallpox you will occasionally find a pustule appear on the conjunctiva. This is of itself not so serious, but the condition which frequently follows is one of the most serious eye conditions that we have to deal with, namely, serpiginous ulcer of the cornea.

These ulcers spread over the cornea, are usually central or nearly so, and if not treated vigorously will partly or oftentimes wholly destroy the vision. It is not the pustule of itself as is often thought that gives the serious trouble, for they appear on the conjunctiva and not on the cornea; but following, or in connection with, the pustule on the conjunctiva you get an infection and the *ulcus serpens* on the cornea is the end result.

Here I desire to report a case which is still under my care.

\* Read at the 62d Annual Meeting of the Missouri State Medical Association, Excelsior Springs, May 26-28, 1919.



Mrs. B., aged 45 years, had smallpox the early part of November, 1918. She had a pustule appear on the conjunctiva of the right eye but was told by her attending physician that there was nothing to do and that nature would take care of it all right. The eye grew gradually worse until some time in the first part of January when she came to me for advice. At this time no pustules were to be seen on the conjunctiva, but an *ulcus serpens* covered about one-third of the cornea. The pupil was contracted and gave scarcely any response to atropin. The patient was suffering intense pain and vision was reduced to light perception only. Here we had not only a serpiginous ulcer but a violent iritis as well to deal with.

This eye has responded to treatment very poorly, but by a free use of the electric cautery and by puncturing the anterior chamber several times she has the promise of saving the eyeball and also a fair amount of vision. May 10 she was comfortable and could recognize friends in her room. She can see people across the street but can not recognize faces at that distance.

If this eye had been kept cleaned with boric acid solution and camphor water, or other like preparation, and the eyes protected from light during and immediately after the attack of variola, in all probability she would have avoided eye complications.

True, sometimes these conditions will arise even when the utmost care is used, but the per cent. of complications will be very small if the proper care is taken to guard against such conditions.

See that your patients' eyes, mouth and nose are at least kept clean, and if the disease under treatment is such that complications of the eyes, ears, nose or throat are probable, give them special care.

As a cleansing solution, I prefer boric acid, sodium chlorid and camphor water. Solutions of argyrol, silver nitrate, ointment of yellow oxid of mercury, may be used if the condition indicates their employment. Don't use argyrol or silver nitrate in acute conditions as is so often done. They usually irritate and aggravate an acute condition. Wait until the acute inflammatory stage is past.

Hot and cold applications are very useful agents. Cold is used principally in recent injuries, traumatic iritis and in gonorrheal conjunctivitis in the first stages. Heat is used much more frequently than cold. Heat dilates the blood vessels and thus accelerates metabolism. If you use cold, change the cloths about every thirty to sixty seconds for an hour, and then rest an hour or more as the case demands. If you let cold cloths get warm you defeat the thing you are trying to accomplish. The same applies to hot applications. Change them frequently and do not let them get cold.

Direct or intense light should be avoided by sick people. A partly darkened room not only soothes the nervous system of the sick man but his eyes as well. Eyes that are discharging should be protected from light and wind but

should not be bandaged, as the bandage holds the secretion and makes the condition worse.

In almost all general diseases the mouth, throat and nose, and quite frequently the ears, are involved.

The ear involvement is usually secondary to the nose or throat. Practically all ear trouble comes as an infection up the eustachian tubes from the nose or throat, so if you care well for the nose and throat you will have only a small amount of ear trouble to treat. In fever conditions the mouth and throat are dry and sordes collect on the teeth. The mouth should be kept moistened and the teeth cleaned. Perhaps the common cold is the most common disease that man is subject to. This condition is so common that a physician is only called in when some unusual condition arises or some complication threatens. The most usual form of cold will be an acute catarrhal rhinitis. Keep nasal secretions cleared out either by swabbing or washing, if such be found necessary. Follow with an oil spray or an antiseptic salve snuffed up the nares.

There is always some danger in spraying or irrigating the nose that you force something into the eustachian tube. So avoid sprays and douches in the hands of the patient as much as possible.

In using the applicator avoid irritating an already inflamed membrane.

A method that I find very satisfactory in caring for the nose, both as a prophylactic and remedial measure, is to instill about five drops of a 20 per cent. solution of argyrol into either side of the nose. This is put in with a medicine dropper with the patient lying on his back. Used in this way there is no danger of forcing anything into the eustachian tubes on account of the small amount used and the absolute lack of force. This also has the advantage of not producing mechanical irritation. The argyrol spreads over the greater part of the nasal membrane, especially the mouth of the eustachian tubes.

In connection with this, a spray of medicated oil is used. Menthol, gum camphor and alboline or some like combination is probably the best. In acute stages the amount of the menthol and camphor used in the alboline must be very small or this will prove irritating. After the more acute stage is past, the strength of the menthol and camphor may be increased with benefit.

I have found that this procedure will in most instances enable the patient, by gentle clearing, to keep the nose clean and as nearly aseptic as is possible but should not be used as a routine practice. The argyrol solution used on a cotton applicator is preferable when the argyrol used with the dropper is not sufficient.

Patients should be warned against blowing the nose violently as this may force an infection

up the tube. In scarlet fever and diphtheria it is especially important to look after the nose and throat. This is not so apt to be neglected in diphtheria as in scarlet fever. If either washing or swabbing is used it must be done very carefully. In scarlet fever, if you will keep the nose swabbed out with argyrol, followed with an ointment of oil and keep the mouth and throat frequently cleansed with a good antiseptic, you will not only keep the nose and throat in a more comfortable condition, but will in most instances avoid middle ear infections, and only a small per cent. of the general toxemia will develop that would if you neglect these organs.

A general toxic condition will develop from nose and throat troubles quicker than from any other part of the body. This is readily demonstrated from the chill, high temperature and extreme aching that will accompany a small peritonsillar abscess.

That cleanliness is next to Godliness is no where truer than when applied to eye, ear, nose and throat in either health or disease.

### ROUND CELL SARCOMA

JAMES G. MONTGOMERY, M.D.  
KANSAS CITY, MO.

H. R., male, white, aged 6, entered Christian Church Hospital, April 28, 1919, with an excruciatingly painful swelling of his right arm.

Patient fell from a tree two years ago (summer of 1917) and injured his right arm. In a brief time he received a second injury following which he began to have neuralgic pains occurring about once a month

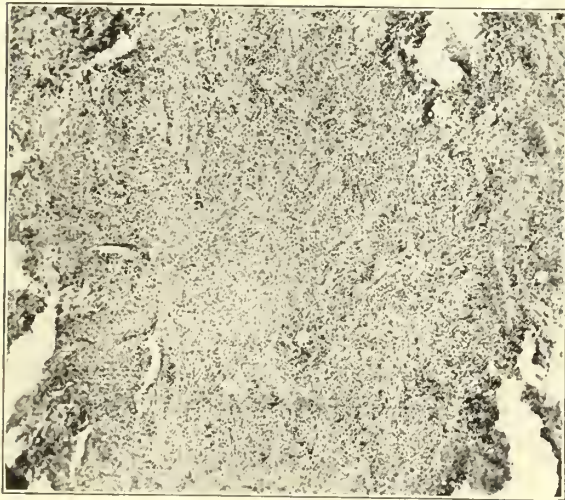


Fig. 1.—Round cell sarcoma—fascia.

and keeping him awake at night unless relieved by hot water bottles. The attacks increased in frequency until April, 1919, when the arm began to swell.

His Wassermann was found to be four plus but treatment with potassium iodid and mercury had no

effect. During his treatment for lues he took mumps, and his arm began to swell and pain more acutely.

April 28, 1919, when we first saw the case, he had a moderate swelling of the middle third of the right humerus that was extremely sensitive to touch, pain



Fig. 2.—Round cell sarcoma—bone.

that required narcotics, temperature 101 F., urine normal, hemoglobin 90 per cent., white blood count 15,600, and roentgen-ray showing osteomyelitis, acute and chronic, and a certain amount of acute infective cellulitis.

April 29, 1919. Incised wound, opened medullary cavity and received 4 ounces of pus. Wound was left wide open and Dakin tubes inserted. Culture showed streptococci.

May 9, 1919. Due to slow recovery through and through drainage was made.

May 20, 1919. It was noticed that the cellulitis was not subsiding in proportion to the infection. Roentgen ray showed little bony change, but extensive infective cellulitis. The tumor's contour was suspiciously sarcomatous. White blood count 22,000.

May 29, 1919. Wound was renewed to insure drainage. Vascularity had greatly increased. A mass containing bone and tissue was curetted from depth of wound. Section made from its grayish smooth homogeneous central area proved to be a round cell sarcoma. Following this operative procedure patient had a violent reaction with temperature almost continuously 104 F. and pain that required repeated hypodermics of morphin.

June 1, 1919. Wassermann repeated was negative. Blood: Hemoglobin 60 per cent. (30 per cent. fall in 31 days); red cells, 2,840,000; white cells, 35,200. P. M. N., 86 per cent.; S. M. N., 9 per cent.; L. M. N., 5 per cent. Urine: Few hyaline and granular casts. Roentgen-ray exposures had little effect on growth.

The two points in the case are: The unusual association of osteomyelitis and sarcoma; the repeated proof that the Wassermann by itself is of no clinical consequence.

425 Argyle Building.



# THE JOURNAL

OF THE

## Missouri State Medical Association

DECEMBER, 1919

### EDITORIALS

#### THE MECHANISM OF "CATCHING COLD"

It is apparently a well established fact that chilling of the body surface, by drafts, by wet feet, or by more severe exposure, is a direct etiological factor in the excitation of acute rhinitis, pharyngitis, and tonsillitis. It is also well known that pathogenic bacteria may exist for long periods on the healthy mucous membranes of healthy individuals. One of the familiar explanations of the fact that cutaneous chilling may initiate infectious processes in the mucous membranes is that the blood, being driven away from the body surface, is directed to the internal organs, there giving rise to congestion and stasis. The resistance of the mucous membranes would thus be lowered and the pathogenic bacteria present flourish and excite infection. Hitherto there has been no direct experimental inquiry as to what actually does take place on the human mucous membranes when the body surface is chilled, and Mudd and Grant<sup>1</sup> have attempted to make a beginning at supplying the deficiency through some ingenious experiments conducted by them at the Washington University School of Medicine. The findings of these St. Louis investigators are the exact opposite of the expected result, namely, cutaneous chilling results in *constriction* rather than in *congestion* of the mucous membranes.

In order to determine changes in the vascular condition of the mucous membranes a thermopile was constructed, the unknown temperature end of which could be applied closely but gently to any portion of the mucous membrane of the palate, tonsil, oropharynx or nasopharynx, and the temperature of this portion be determined. The mouth was held widely open by a gag so that these membranes were in contact with the cold air of the room and were thus constantly losing the heat supplied by the circulating blood. If, then, the mucous membrane vessels should become dilated and more blood circulate through them the temperature of the membrane should rise, and if the vessels should be constricted

the temperature should fall. These changes could be accurately followed by reading the thermogalvanometer.

This method was tested several times by administering amyl nitrite to the subject. This drug causes dilatation of the vessels and therefore should cause a rise in temperature of the mucous membrane and skin. This was found to occur.

The experiments were performed on human subjects and were carried out in a room kept at a temperature of about 18 C. Chilling was effected by removing all the clothes of the subject, and directing the draft of an electric fan against the lower part of his back, or by applying cold wet towels to his back. When this was done it at once became evident that chilling the body surface caused a marked depression of the mucous membrane temperature. Thus, in nineteen instances of exposure to cold, a fall in mucous membrane temperature resulted in seventeen instances, seven in seven cases of chilling by cold wet towels, six in six by the electric fan, and four in six chillings by mere removal of the wraps. The two exceptions were probably caused by local hyperemia of the mucous membrane resulting from mechanical irritation by movement of the thermopile terminals.

The average mucous membrane temperature falls were: for chilling by mere unwrapping, 0.51 C. developed in 8.25 minutes; for chilling with the fan, 0.81 C. in 6.5 minutes; for chilling with cold wet towels to the back, 0.64 C. in 3.7 minutes.

A considerable drop either in blood temperature or in blood pressure might have resulted in a fall in mucous membrane temperature. Experiments were therefore carried out to determine the effect of chilling on these, and it was found that practically no change in either blood temperature or blood pressure occurred, such changes as were observed being in the direction of a rise rather than a fall. Therefore the fall in mucous membrane temperature was not due to either of these factors.

It was found that cutaneous chilling caused an increase in the rate and depth of respiration, and that this change in respiration caused a slight fall in mucous membrane temperature by increasing the amount of cold air passing through the passages, or by local reflex vasoconstriction, or by both. Therefore in all subsequent experiments the respiration was carefully controlled: the rate by having the subject breathe in time with a loudly clicking metro-

1. Jour. Med. Research, May, 1919.

nome, and the depth by thoracic and abdominal pneumographs which recorded respiratory depth on smoked paper in sight of the subject who could thus keep the depth constant throughout the experiment.

Seven experiments were carried out with the respiration thus controlled and a fall of mucous membrane temperature resulted in all cases. In four experiments of similar pattern there was an average fall of 1.42 C. reached in 18.4 minutes. When the temperature had ceased to fall the fan was stopped and the subject wrapped. The mucous membrane temperature rose only 0.73 C. Its maximum recovery was reached in 12.7 minutes and was 0.69 C. below the last point before chilling. In these experiments the temperature of the skin of the forehead, which was not exposed to direct chilling, was followed by applying similar thermopile terminals to it. It was found that chilling was followed by reflex vasoconstriction of the vessels of the skin causing an average fall in temperature of 1.73 C. When the subject was rewrapped the skin promptly reacted, its temperature rising to a point slightly above the control level.

In all the experiments, except one on the faucial tonsil, there was incomplete recovery of the mucous membrane temperature after chilling was ended. In the tonsil experiment the temperature rose quickly almost to control level.

The results were checked up by observations of the appearance of the mucous membranes and their blood vessels. The investigators thought that blanching occurred on chilling, but this needed disinterested and expert opinion, which was generously accorded by Dr. F. L. Morgan, Dr. A. F. Koetter, Dr. C. A. Gundelach, and Dr. G. E. Hourn, laryngologists, and by Dr. M. T. Burrows and Dr. L. C. Bean. Twelve experiments were performed and all the observers said that the membranes paled while the skin was being chilled. After rewrapping the subject reddening occurred but apparently only to a slight extent.

The after effects of chilling were rather interesting. Most of these experiments were performed in the middle of the summer, and six different men were used as subjects. In four instances, exposure was followed by a "cold" or sore throat.

For convenience of discussion, simple acute infections of the nose and throat may be considered as falling roughly into two groups: first, those in the etiology of which the event

of prime importance is the arrival on the mucous membrane of the virus. Such infections tend to occur in epidemic form, for example, epidemics of streptococcus pharyngitis.

In the second group, with which this work was primarily concerned, the virus was already present as a part of the harmless flora of the upper respiratory tract and becomes an active infective agent only through a change in the host.

There is no doubt that there are many predisposing factors in the etiology of these infections, the most important being anything which leads to a general lowering of the resistance of the body. But the most common exciting cause is exposure to cold. It has been demonstrated that such exposure results in a constriction of the vessels of the mucous membranes of the nasopharynx, oropharynx, tonsils, and palate. No definite conclusions can be drawn from this fact, but it may be advanced as a working hypothesis that the ischemia incident on cutaneous chilling, by decreasing cell respiration, or by retarding removal of the products of cell metabolism, or by increasing the permeability of the epithelial cell surfaces to the bacterial product, or by decreasing the local supply of specific antibodies, or by altering the media in the tonsillar crypts and folds of the pharyngeal mucosa in which the bacteria are living, or by a combination of these factors, might so alter the relation between parasite and host as to excite infection.

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#### NOTABLE SCIENTIFIC MEET IN ST LOUIS

The meeting of the American Association for the Advancement of Science in St. Louis during the week of December 29 is of peculiar interest to the members of the medical profession. The American Association is a result of specialism in science and is composed of a representative group of men who have demonstrated what America can do in the advance of knowledge. It is an active, aggressive organization, whose meetings are attended by scientists from over the entire country. The Association has recognized the sterling worth of medical research and has during the past twenty years elected three medical men as president. Dr. Charles S. Minot of Harvard University, a great leader in the investigations in human embryology, was president in 1901; Dr. W. H. Welch, dean of American pathologists, was elected to the office in 1906, and at the St. Louis meeting, Dr. Simon



Flexner, Director of the Rockefeller Institute since 1903, will replace Prof. John M. Coulter, Professor of Botany at University of Chicago and sometime president of Indiana University. It has been the honor and privilege of the medical profession to supply these three eminent men as presidents of the Association for the Advancement of Science. The fact that Dr. Flexner takes office in St. Louis should stimulate the profession of the state to show an active interest in our visiting scientists and to avail themselves of the opportunity to demonstrate that the medical profession appreciates the honor which justly comes to a learned colleague who has made monumental contributions both directly and indirectly in the field of pathology and bacteriology. The doctors of the state are eligible for membership and should recognize and encourage the advancement of science in becoming members of the Association, which is placing America to the front in scientific achievement.

#### FURTHER COMMENTS ON THE POSTGRADUATE MEETINGS

The postgraduate meetings announced in our last issue have been held and several others are in course of preparation for December. The comments from the councilors of the districts and others who have been watching the progress of this effort on the part of the state association to encourage a method of bringing graduate teaching to the country practitioner will serve to inform our members of the value of the work more effectually than by any other means, so we take pleasure in presenting the views of those members who have expressed their opinions on the subject.

The meeting at Cape Girardeau held on October 22 was arranged by Dr. H. L. Reid of Charleston, Councilor of the Twenty-Second District, and the members of the Twenty-Third, Twenty-Fourth and Twenty-Fifth Districts were invited to attend. Over forty physicians were present, the double attraction of the session of the Southeast Missouri Medical Association and postgraduate meeting lending an impetus to encourage attendance. Dr. Reid expresses the hope that the postgraduate meetings will become a part of the regular work of the State Association "for the interest was intense and general," and he continues:

Contrary to our doubts and fears, cases for clinical demonstration were plentiful and several cases, for lack of time, had to be assigned to committees for attention outside of the clinic auditorium. We physicians of the rural communities could not but appreciate

the fact that through the interest of the Council these lectures were brought to us and that we did not have to seek far and away—and at great expense—to secure the benefits derived therefrom. The instructors were men whose work and personality are entitled to the highest professional commendation. The benefits received by the country practitioners through the postgraduate meeting conducted by the leading clinicians of the state are many and obvious. The great success of this meeting was due very largely to the full measure of support contributed by the medical profession of Cape Girardeau.

Dr. Fred B. Hall of St. Louis, president of the Southeast Missouri Medical Association, said: "The postgraduate meeting is one of the most hopeful means I have observed for bringing knowledge and improved methods of diagnosis and treatment to the general practitioner in the country districts," and Dr. A. H. Hamel, former president of the Southeast Missouri Medical Association and Councilor of the Twentieth District, was "very well pleased with the success of this undertaking. The lectures were highly instructive and the deep interest manifested by the members was a source of the greatest encouragement to me as an officer of the Missouri State Medical Association."

At Moberly, where a meeting was held on October 23, the lectures were received with the same enthusiastic attention as was manifested at the other meetings but the number in attendance was somewhat smaller than at Cape Girardeau, there being about thirty-five present. From the report of the councilor of the district, Dr. D. A. Barnhart, Huntsville, we quote:

We certainly had a fine meeting; very interesting and profitable. The talks and papers were all good and thoroughly enjoyed by all. They were all delivered in the afternoon as some of the members had to leave, and the evening was entirely taken up by discussions and practically all took part. There were about thirty-five physicians present, not including the lecturers. There would have been a very much larger attendance if it had not rained in the forenoon and looked threatening all day.

Dr. A. R. McComas of Sturgeon, Councilor of the Ninth District, says: "The lectures were interesting and well received, and all the men I talked with were well pleased. The greatest number of Moberly physicians that I saw present at one time was six."

From the secretary of the meeting, Dr. F. S. Fleming of Moberly, we have the following report:

Our postgraduate meeting was entirely satisfactory from every viewpoint and went far beyond our expectations. For the society, I want to express our great appreciation for the services of Drs. Fleisher, Westlake, Taussig, and Campbell. I do not recall a

more interesting meeting nor one more enjoyed by all present.

I can assure you the postgraduate meetings can be made a great success, and I know of no better means by which we rural doctors can be informed as to the up-to-date, so to speak, points in medicine and surgery.

The meeting at Springfield held in conjunction with the Southwest Missouri Medical Association on October 23 was the best attended session of any of the postgraduate meetings, there being almost one hundred at the meeting. Dr. A. L. Anderson of Springfield, Councilor of the Twenty-Eighth District, says the meeting was highly profitable and so well enjoyed by the physicians in that district that a permanent organization was formed to look after arrangements for postgraduate meetings in the future. He writes:

The postgraduate meeting was a decided success. There were about 100 physicians present, and Drs. Sale, Coughlin, and Shahan gave us a splendid program which was both scientific and practical.

All the doctors were well pleased and expressed a desire for more meetings of the same kind. At the close of the session a rising vote of thanks was given the St. Louis doctors. On Friday Dr. N. P. Wood was with us and presided as chairman of our meeting while we were perfecting our organization, and he explained fully the purpose and scope of the postgraduate courses. We organized the Twenty-Eighth Councilor District and voted to invite the Twenty-Sixth, Twenty-Seventh and Twenty-Ninth Districts to join us. The following officers were elected: Chairman, Dr. W. A. Camp; secretary, Dr. Edwin L. James; treasurer, Dr. W. P. Patterson, all of Springfield.

Friday night Dr. Wood gave a masterful address before a large gathering of the Greene County Medical Society. He told of the progress made in medicine in the past, what we are trying to do today, and what we might hope for the future. He predicted that the time would come when we would banish from the world all infectious diseases.

Dr. Edward H. Skinner of Kansas City and Dr. Richard Lee Russell, U. S. Public Health Service, both made good talks.

At Columbia, which is the last meeting from which we have reports before going to press, the members of the Ninth District met on November 10 and carried out a most interesting program. Dr. A. R. McComas, Councilor of the district, was greatly encouraged with the success of the meeting. The attendance was not as large as was expected due to weather conditions, and our president, Dr. Wood, was unable to reach Columbia on account of an unexpected change in train schedules at Sedalia, where he had to change cars. "There were, however," writes Dr. McComas, "quite a large number present and the lectures were received with much appreciation and interest. They were all highly instructive."

Dr. J. E. Jordan, Secretary of Boone County Medical Society, describes the postgraduate meeting in very enthusiastic terms. The session was held in the medical building of the state university, was well attended and aroused great interest. He writes further:

One of the most interesting and instructive programs it has ever been our pleasure to listen to was carried out and the physicians of this district are appreciative of the fact that the success of the meeting depended in no small degree on the efforts of our able councilor, Dr. A. R. McComas of Sturgeon. We are hopeful that this meeting will be repeated in the near future. The program began at 1 p. m. with an excellent lecture by Dr. R. L. Sutton of Kansas City on "The Diagnosis and Treatment of Cancer of the Face," illustrated by lantern slides showing the histology, pathology and treatment. Dr. C. H. Neilson of St. Louis read a most excellent paper on "Some Observations on Influenza," which was followed by a very interesting paper on "Ear, Nose and Throat Complications of Influenza," by Dr. William E. Sauer of St. Louis. Dr. Neilson's and Dr. Sauer's papers were discussed by Drs. Guy L. Noyes, Dan G. Stine, W. P. Dysart, and Frank G. Nifong of Columbia, and Dr. A. R. McComas of Sturgeon. Dr. W. H. Stauffer of St. Louis gave a most interesting and instructive lecture on the "Treatment of Hemorrhoids and Fistula in Ano," illustrated by lantern slides showing the histology, pathology and treatment.

At 6:30 a most excellent dinner was served at the Tavern Hotel and at 8 o'clock Dr. Stauffer favored us with one of his interesting talks on organized medicine. Thus closed a most interesting and instructive meeting.

The geographical conditions and railroad facilities in the Ninth Councilor District are such that Dr. McComas feels it is necessary to hold two meetings in that district, so the members have requested him to prepare a program for a meeting at Mexico on December 10. This is being done. Another meeting is being arranged for December 18 for the Eleventh Councilor District under the direction of the councilor, Dr. G. W. Hawkins of Salisbury, which will be held at Chillicothe.

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## ST. LOUIS AS A MEDICAL CENTER

The meeting of the American Association for the Advancement of Science in St. Louis this month should stimulate the medical profession and scientific societies of an allied nature to encourage organized bodies of scientists to hold their sessions in the metropolis of the Middle West more frequently. We have learned recently that the Society of American Bacteriologists has not selected its place of meeting for 1920 and the suggestion has been made that the St. Louis profession would benefit very materi-



ally from the presence of this important body of men.

Here is a splendid opportunity for the St. Louis workers in the field of bacteriology, for laboratory workers and for the members of the profession generally, to bring to their door the result of a year's labors by the trained workers in an important branch of the science of medicine. The general laboratory worker, whether trained in medicine or not, should find affiliation in the bacteriological society extremely valuable to him in numerous phases of laboratory study and undoubtedly many members of the medical profession throughout the state would be not only willing but glad to join in the movement to bring this society to St. Louis next year.

Membership in the society of bacteriologists has a value for the practitioner of medicine and laboratory workers as well as for those who devote their energies solely to the advancement of this special branch of scientific endeavor. The researches of its members have a tremendous influence on the practice of medicine and therefore the practitioner who keeps himself informed is the one who can take quick advantage of every forward step made by others with whom he is associated in society affiliation.

The medical profession can profit by the assembling of scientific men at frequent intervals in St. Louis where excellent facilities for pursuing the purpose of the sessions exist and the benefit would extend to members of the profession throughout the state, because many would attend such meetings at St. Louis who would not feel the urge to travel long distances. Another advantage accruing would be the fame as a medical center that would come to us. Everybody interested in medicine in this state readily acknowledges that St. Louis possesses the wealth of material and the facilities to utilize it in the development of the science that are needed, but a concentrated organization to manipulate the material to the best advantage has been lacking. A long step toward removing this obstacle has been made in the creation of the St. Louis Clinics, which should develop into a powerful force for bringing medical St. Louis to the forefront. Isolation is not good for medicine nor for the medical man. Numerous gatherings of medical and allied scientific bodies in our state cannot fail to stimulate a wider circle of influence for our own workers, a broader knowledge of the researches of others and lend a moiety of that fame as a medical center to which, with due modesty but quite righteously,

St. Louis can lay claim. That this is beginning to be acknowledged is evidenced by the scientific meetings which have already been scheduled for St. Louis. In addition to the meeting of the American Association for the Advancement of Science mentioned in another column, the National Tuberculosis Association meets at St. Louis in April, 1920, and the American Child Hygiene Association will hold its session in that city in November, 1920.

Let us have more scientific gatherings in the Middle West.

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#### WESTERN SURGICAL ASSOCIATION AT KANSAS CITY

The twenty-ninth annual meeting of the Western Surgical Association will be held in Kansas City, December 5 and 6, under the presidency of Dr. Roland Hill of St. Louis. This body was organized thirty years ago, having for its purpose the advancement of surgery in the middle and western part of the United States. It was first known as The Western Surgical and Gynecological Association but this name was later changed to its present title. Its membership, limited to 150, is composed of eminent surgeons in the territory extending from Indianapolis to the Pacific Coast. During the recent war more than one-third of its members were in active service in the Army.

This year's meeting will be held during the same week and at the same place as the association of Rock Island Railway surgeons and promises to be the largest and most enthusiastic gathering that the organization has ever experienced.

Dr. Thomas S. Cullen, professor of gynecology in Johns Hopkins University, will be the guest of the association. Thirty members have asked for places on the program presenting a variety of subjects that will prove a great incentive to every member to attend. Among the Missouri members who are contributing articles are: Dr. Frank G. Nifong of Columbia on "Merycism Associated with Appendicitis"; Dr. M. G. Seelig of St. Louis on "Rhinophyma"; and Dr. M. B. Clopton of St. Louis on "Tuberculosis of the Great Trochanter."

The headquarters will be at the Muehlebach Hotel, where the sessions will also convene. The annual banquet will be held on Friday, December 5. Dr. Howard Hill, Rialto Building, Kansas City, is chairman of the committee of arrangements to whom all communications may be addressed.

## NEW HEALTH POLICY FOR KANSAS CITY

The Jackson County Medical Society recently assumed an aggressive attitude toward the method of conducting the health department and city hospital current in Kansas City which has resulted in a promise from city officials that the health policy of the present administration will undergo a change and that the health department will be conducted more as a business proposition and not as a piece of political machinery. The attack of the medical society caused an investigation of the conditions at the General Hospital, which resulted in a demand on the mayor by the president of the health board for the resignation of the hospital superintendent. When this demand was refused by the mayor the president of the board, Mr. W. P. Motley, resigned and Mr. Hugh C. Miller, a real estate operator, was appointed head of the board. He announced that he would do his best to straighten out the health department tangle. Soon after his appointment the board declared its intention to run the department on a business basis as outlined in the foregoing. The members of the medical staff of the hospital it is said will be invited to attend the meetings of the board to give their aid in administering the affairs of the hospital.

The *Bulletin of the Jackson County Medical Society* says these declarations are "accepted in good faith by the Jackson County Medical Society, whose members compose the serving medical and surgical staffs of the hospital, and will give their hearty support to all measures and methods looking forward to an increased efficiency in both the management and work of the department of health."

We congratulate the Jackson County Medical Society and the citizens of Kansas City on this forward step in the administration of the public health affairs of the city. From a purely business standpoint it would be a paying investment to provide a modern system of scientific care of sick and injured persons and to maintain that system wholly free from political machination.

## PSYCHIATRY FOR SOCIAL WORKERS

The Missouri School of Social Economy of the University of Missouri has this year added to its curriculum a course in psychiatry for social workers, given by Dr. Francis M. Barnes, Jr., of St. Louis. This year the work is offered as a special extension course for actively en-

gaged social workers and not to the student body as a whole. The course will cover a period of at least eleven weeks. It will consist of lectures once a week for ten weeks; demonstrations of cases of mental disorder at the St. Louis City Sanitarium; assignment of cases for field work; personal interviews and discussions between the social worker and Dr. Barnes on the problems presented in the field work; supplementary reading.

It will be the purpose of the course to give the social worker such information of mental hygiene that she may be able to recognize and utilize the mental factors which enter into the causation of social inadequacies. Psychiatry will be presented with the intention of assisting the social worker and not to make of her a psychiatrist.

## OBITUARY

DR WILLIAM H. ABER, M.D.

Dr. William H. Aber of Aulville, who was killed by a train striking his automobile last August, was a native of Missouri and practiced at Aulville since his graduation from the Beaumont Hospital Medical College at St. Louis, 1897. He was an honest, painstaking, upright physician, a member of the Lafayette County Medical Society and the Missouri State Medical Association and had earned the confidence and respect of his patients and the members of the medical profession.

FERDINAND SHRYMAN, M.D.

JAMES W. SMITH, M.D.

Dr. J. W. Smith of Richmond, a graduate of the St. Louis Medical College, now Medical School of Washington University, 1874, died at his home October 21, aged 71. Dr. Smith was born in Ray County and educated at the Richmond College. Soon after his graduation in medicine he entered practice at Orrick but later moved to Richmond where he continued his activities in the profession. He was active in civic affairs that were of a progressive nature and was president of the Richmond Exchange Bank. He was a member of the Ray County Medical Society and the Missouri State Medical Association.

BRITTON EMERY TAYLOR, M.D.

Dr. Britton E. Taylor was born near Brighton, Mo., May 14, 1888, and educated at Drury College and the State Normal at Springfield,



graduating from the National University of Arts and Sciences in 1912. He was united in marriage Jan. 11, 1911, to Miss Daisy Fay Spencer of Hannibal, who was at that time a sophomore in the same medical college.

Dr. Taylor was a member of the county, state and national medical associations, also of the Southwest Missouri Medical Association, a Mason and a member of the Woodmen of the World. He leaves a wife, a daughter 6 years old and a son 3 years old.

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#### ARMINIUS F. BOCK, M.D.

Dr. A. F. Bock of St. Louis, one of the oldest practitioners of that city, died at his home November 14 from heart disease, aged 73, after fifty years of continuous active practice in St. Louis. He was born at Waterloo, Ill., but obtained his medical education in Germany, graduating from the University of Wurzburg in 1868. After spending a year visiting medical centers of Europe he entered private practice in St. Louis. He was one of the founders of the Deaconess Hospital, a member of the St. Louis Medical Society and Missouri State Medical Association. Among the children who survive him are three daughters who married St. Louis physicians: Mrs. C. H. Shutt, Mrs. Louis Hempelmann, Mrs. H. D. Brandt.

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#### OSCAR O. MEREDITH, M.D.

Dr. Oscar O. Meredith of Breckenridge, a member of the Caldwell County Medical Society and the Missouri State Medical Association and one of the most prominent physicians in that part of the state, was instantly killed September 27 at Breckenridge when an airplane in which he was a passenger fell to the ground from a height of about 200 feet. Dr. Meredith was a graduate of the National University of Arts and Sciences, 1903, and was 39 years old. He has been a member of the organized medical profession for many years and filled various offices in the county medical society. He accepted a commission in the Medical Corps of the Army during the war with Germany and was honorably discharged early this year with the rank of lieutenant.

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#### PETER G. WOODS, M.D.

Dr. P. G. Woods of Versailles, a graduate of the St. Louis Medical College, now Medical School of Washington University, 1867, died in a hospital at Kansas City, September 14,

aged 75. Dr. Woods was one of the most active members of the medical profession for many years and extended his activities to other fields, having been identified with the organization of the Bank of Versailles of which he was the first president, a position which he retained for fourteen years; treasurer of Morgan County from 1872 to 1882 to which position he was re-elected in 1886 and again in 1888, and a presidential elector on the Democratic ticket in 1916, when he cast his vote in the Electoral College for Woodrow Wilson and Thomas R. Marshall. He was an earnest worker in the county and state associations and used his best efforts to keep the county medical society in active operation. He served the county medical society in various capacities and was its secretary at the time of his death.

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#### JAMES K. GRAHAM, M.D.

Dr. J. K. Graham of St. Joseph died at his home November 10 after an illness extending over a period of two years, aged 61. Dr. Graham was a graduate of the College of Physicians and Surgeons, St. Joseph, 1882, and practiced in Buchanan County during his entire professional life. He served two terms as county physician and one term as city physician of St. Joseph. A severe epidemic of smallpox spread over the city while he was city physician, overwhelming him with work in the care of the unfortunates and compelling him to devise ways and means not only for the protection of the patients, but to guard his own health during the height of the epidemic. It is said he deserted his private interests entirely and devoted all his energies to the protection of the community during an unusually severe winter and with exceedingly crude facilities for the care of the patients. He was a member of the Buchanan County Medical Society and enjoyed the affection and esteem of a large circle of friends and patients.

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#### ALBERT H. MEISENBACH, M.D.

The medical profession has sustained a great loss in the death of Dr. A. H. Meisenbach who practiced in St. Louis for many years. He received his early education at Wesleyan Seminary in Illinois and began the study of medicine in that state but was graduated from the St. Louis Medical College in 1876. From the municipal institutions where he was intern for a time he began practice at Mascoutah, Ill., and then went abroad and studied medicine in the different medical centers for a year.

For a while he was professor at the Marion-Sims College of Medicine in St. Louis. He was quoted frequently by writers and publishers and had made a name for himself locally and nationally.

While in active work he was a member of the St. Louis Medical Society, medical Society of the Alumni of the St. Louis City Hospital, Mississippi Valley Medical Association, Missouri State Medical Association, and the American Medical Association.

He left a reputation as a writer and a capable, conscientious, painstaking surgeon. The medical profession deeply deplores his loss and extends to his family their sympathy.

R. M. Funkhouser, M.D.

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#### JOHN A. B. ADCOCK, M.D.

Dr. J. A. B. Adcock of Warrensburg, well known to practically every member of the medical profession in the state through his long connection with the state board of health, died at his home after 42 years of active practice, from cerebral hemorrhage, age 68 years. Dr. Adcock was a kind and genial gentleman, a capable physician and had earned the esteem of a wide circle of friends both in the medical profession and in his public health activities. He was graduated from the Eclectic Medical Institute, Cincinnati, in 1877 and later entered the University Medical College of Kansas City from which he was graduated in 1901. He practiced at Knobnoster and Independence and finally located at Warrensburg. In 1905 he was appointed a member and secretary of the state board of health by Governor Folk, serving through that administration and when Governor Major was elected in 1913 Dr. Adcock was again appointed to the same position which he filled throughout Governor Major's term of office. Dr. Adcock was earnestly devoted to his duties and uncovered several attempts by unworthy applicants for licenses to practice who sought to obtain the coveted privilege through the use of fraudulent papers. He was unbiased in his judgment of the rights of physicians and ever ready to assist in directing the proper action on all questions where physicians or citizens seemed uncertain how to act. This was often exemplified in his decisions concerning the control of contagious diseases, his chief thought being directed to the protection of the people while not forgetting the rights and privileges of the afflicted persons. He was a member of the Johnson County Medical Society and the Missouri State Medical Association.

#### JOHN YOUNG BROWN, M.D.

Dr. John Young Brown of St. Louis died at Phoenix, Ariz., October 30, from heart disease, aged 54. He was born at Henderson, Ky., the son of a former governor of that state and related by ties of blood and marriage with many illustrious people. He was a graduate of the Bellevue Hospital Medical College, 1887, and for two years following his graduation he studied surgery with the distinguished surgeon of Philadelphia, the late Dr. Joseph Price. Coming to St. Louis he entered private practice and after a few years he was appointed superintendent of the St. Louis City Hospital, where he developed his talent for surgical procedure in which he excelled, especially in abdominal surgery. When his term as superintendent of the City Hospital expired he was made professor of surgery in the medical department of the St. Louis University and later was appointed chief surgeon of St. John's Hospital, both of which positions he was holding at the time of his death. He was one of the original members of the medical section of the Council of National Defense which was created soon after we entered the war with Germany, and was medical aid to Governor Gardner. At the time of his appointment to the latter position he accepted a commission as first lieutenant in the Medical Corps of the Army but was soon advanced to the rank of major. He was a member of the St. Louis Medical Society, Missouri State Medical Association, Fellow of the American Medical Association, a member of the Southern Surgical and Gynecological Association of which he was a former president, and a member of other notable surgical associations. On November 21 a memorial service was held in honor of Dr. Brown in the auditorium of the St. Louis University conducted jointly by the members of the faculty of the university and the St. Louis Medical Society.

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#### THEODRICK C. BOULWARE, M.D.

It is with regret that we are called on to relate the sad news of the death of our neighbor and long time friend, Dr. T. C. Boulware. There is not a physician in the state better known than Dr. Boulware was. He was loyal to the profession and to his clientele. He stood firm for what he believed to be right; even in the face of obstacles and many diversities he conscientiously contended for every inch of ground belonging to his side of the question. He was known by the profession as the champion story-



teller. While he enjoyed this distinction yet he was a good listener and a hearty laugh at a new joke. By his jovial disposition he always dispensed cheer and sunshine in his midst.

Theodrick C. Boulware was a native Missourian, born in Callaway County in 1844. He was graduated by the old Missouri Medical College at St. Louis in the year 1868. In the same year he located in Bates County and one year later moved to Butler, becoming one of the pioneers of the city, where he remained until his death, Sept. 10, 1919, from chronic interstitial nephritis aggravated by an influenzal attack.

Dr. Boulware had always exhibited a deep interest in matters pertaining to the advancement of the profession. For many years he was a member of the American Medical Association, the Missouri State Medical Association of which he was at one time vice president, and was also a member of other medical organizations. He was for thirty years local surgeon for the Missouri Pacific Railway, and local registrar of vital statistics at the time of his death. He was one of the incorporators and a director of the Missouri State Bank at Butler, a position he was holding at the time of his death, and was identified with other interests calculated to promote the welfare of the city of which he had been a prominent and influential citizen for nearly a half century.

Dr. Boulware's professional career was without spot or blemish. His record was one of liberality of heart, broadminded, upright and a useful member of the profession and of the community. He practiced medicine longer than any other doctor in the county, his long experience under the trying conditions of the early days giving him an unlimited supply of anecdotes which earned for him the title referred to at the beginning of this tribute. He was 75 years old at the time of his death.

T. F. LOCKWOOD, M.D.

#### LAFAYETTE HENSON, M.D.

At a called meeting of the Lawrence-Stone County Medical Society, October 26, the following resolutions in memory of Dr. Lafayette Henson of Galena, who died Oct. 2, 1919, were adopted:

WHEREAS, The Lawrence-Stone County Medical Society has in the death of Dr. Lafayette Henson lost a member of whom we were justly proud and could ill afford to lose; whose counsel was always good and tended to elevate our profession; and

WHEREAS, The loss of such a member is always an occasion that our society views with a heavy heart and saddening thoughts, a breaking up of the chain of fraternal companionship; therefore be it

*Resolved*, That we will all work for the upbuilding of our society and profession to the high plane that was his ideal; and be it further

*Resolved*, That a copy of these resolutions be sent to Dr. Henson's family, a copy be placed on our minutes and a copy sent to THE JOURNAL for publication.

F. S. STEVENSON, M.D.  
H. L. KERR, M.D.  
R. C. ROBERTSON, M.D.  
Committee.

At the funeral services, Dr. F. S. Stevenson of Aurora read a tribute to Dr. Henson which we feel should be made a part of the record that the society desires to inscribe in memory of our departed member. The address follows:

*To the members of the Lawrence-Stone County Medical Society and friends:*

We have met today to pay our last tribute of respect to one of our best beloved members, Dr. Lafayette Henson. It would be presumptuous on my part to come into this community and try to tell his people anything in regard to his labors among them for the past thirty-five years. They knew him. They have lost their friend and their physician and they know their loss. In our society we have lost a friend and brother, one who always worked and toiled for the upbuilding of our society and the betterment of our association. In these days of specialization it is a comforting thought to the people of any community to know that there is a man to whom they can turn for help, one who, knowing their distress is of the mind or body, always stood ready to help. A real doctor of the old school! And the big heart of him, who saw no harm in anyone! There was none to whom his helpful hand was not held out with a large understanding of human frailties and an enveloping sympathy and kindness. And the big mind of him, the cheer, the humor, the kindly twinkle of his eye, the wonderful ability to absorb his reading and study, and back of it all the ability and knowledge of his sacred calling, were beautiful talents that brought peace and confidence to his patients. He brought life, cheer, and hope to the sick room, and love and sympathy beyond power to express. He did not seem to grow old for his heart was filled with the eternal sunshine of youth. His life was one great example of love and was spent in the service of those whom he loved. They came first always and if there was anything left he took it as his share, never complaining that it was so little. He was a man of courage and honor, a man whom neither money nor position could buy, a man of sterling worth, a man who would not lie. I wish that I had the power to pay this man the tribute that he deserved. Sometimes, misunderstood by the people, he was censured for doing the things he knew to be right. When he knew that he was right he never faltered and no ulterior motive was ever known to sway him. Not a man of oratory, not a man of words, but a man of deeds. Can I say more? I am proud to have been his friend for thirty-three years.

To this little village of Galena and community where his life has been spent; where he was born and reared and spent his years of professional life; where he married and took up as a young man the cares of husbandhood and fatherhood, the news of his death is a sad blow. To you and to his wife and children we extend the sympathy of our society. Death but marks the terminal of earth's journey and is the transition state to prepare us for the great beyond. But he who like our departed brother holds himself as a mere infinitesimal being, save as he may commingle his impulses and inspirations with the universal scheme, must become an indispensable part of the general plan. The tribute paid today by the people of this town and community shows in a small degree the esteem in which Dr. Henson was held by his people. We reach for salvation, we grope for understanding, but our mind fails; we build by the rule of philosophers and prophets and when we would crown our success and superstructure it crumbles and is gone. Man cannot contemplate the flowers and trees, the mountains and valleys, the sun, moon, and stars, without there awaking in his breast a fervid hope of the life beyond. When the autumn of life is come and we shake off these bodies that have been our abiding place while here on earth, we cannot believe the great author of our being will leave neglected the souls of men. We believe that some way, somehow, we shall meet our brother again.

F. S. STEVENSON, M.D.

## NEWS NOTES

SEND US some "Strikes and Putts." See advertising page xxii. (Suggest a better name for the column if you can think of one.)

THE Pennsylvania State Medical Association has increased the state assessment of members to \$5 per annum while Indiana and Texas have increased their state assessment to \$4.

MR. HUGH C. MILLER, real estate operator of Kansas City, has been appointed president of the hospital and health board of Kansas City to succeed Mr. W. P. Motley, who resigned.

DR. B. Y. JAUDON, associate medical director of the Missouri State Life Insurance Company, has been appointed medical director of the company to succeed Dr. S. B. Scholz, Jr., who has resigned.

EDINA citizens are campaigning for funds to erect a hospital in that city. The Chamber of Commerce and the physicians have begun soliciting contributions from the people in the county as well as in Edina.

DR. SIMON MCNEARNEY of Florissant, physician at the state penitentiary, has resigned and Dr. W. A. Clark of Jefferson City has been appointed acting physician until the position has been filled by a permanent appointment.

GENERAL GORGAS reports that yellow fever has been wholly eradicated from South America and that its disappearance in that country wipes the disease off the face of the earth. Dr. Gorgas has been elected an honorary member of the National Academy of Medicine of Peru.

DR. PHILIP SKRAINKA of St. Louis, editor of *Medicine and Surgery*, has opened a department for the revision and correction of manuscripts of medical papers intended for publication or presentation at medical societies. This department will be under the personal supervision of Dr. Skrainka.

DR. G. CANBY ROBINSON of St. Louis was elected chairman of the Section on Medical Education and Dr. John R. Caulk of St. Louis was elected vice chairman of the Section on Surgery at the Nashville meeting of the Southern Medical Association, November 11. About 1,200 attended the meeting.

DR. GEORGE W. CRILE of the surgical staff of the school of medicine of Western Reserve University has given \$100,000 to endow a chair of surgery in the school. Dr. Crile is professor of surgery in the school and was head of the Lakeside Hospital Unit of Cleveland which was one of the first American units in France.

THROUGH a special committee recently appointed by the board of directors of Washington University a campaign has been started for increasing the endowment fund so that the salaries of the teachers may be raised. The committee expects to raise a fund of \$2,000,000 for the purpose, the contributions to be invited from the alumni and the general public.

DR. R. L. RUSSELL, Director of the Venereal Disease Division of the state board of health has established three municipal clinics in which 3,184 venereal disease patients had been treated up to the middle of November. In the treatment 317 doses of arsphenamin were administered, 80 Wassermann's were made and 275 slides were examined for gonococcus. Physicians have reported 321 cases.



ALL employees of Armour & Company in Chicago and other cities where Armour plants are located may have the influenza vaccine administered without charge, and a general educational campaign along health lines particularly with reference to the "flu" is being carried on among them. The vaccine is prepared according to the formula of Dr. E. C. Rosenow.

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DR. HARRY M. MOORE of St. Louis has accepted the position of surgeon in charge of the Frisco Railway Hospital at Springfield, Mo., and has assumed charge of the institution. Dr. Moore has practiced in St. Louis ever since his graduation from the Washington University Medical School in 1898 and served in the Medical Corps of the Army during the late war.

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THE Wabash Railway Surgical Association held its thirty-seventh annual meeting in St. Louis November 13. Among the papers on the program was one by Dr. J. H. Thompson of Kansas City entitled, "The Treatment of Traumatic Cataract." Dr. J. M. Guy of Danville, Ill., was elected president and Dr. J. Frank Harrison of Mexico vice president. About sixty Wabash surgeons attended the meeting.

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CALIFORNIA proposes to be one state in the Union where every citizen shall have a reading and speaking knowledge of the English language, so a lack of this phase of Americanism has been made punishable. The law requires persons between eighteen and twenty-one years of age who cannot read or speak English shall be arrested if they refuse to attend school at least four hours a week to learn the language.

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THE maternity home conducted by Dr. A. L. Gray at St. Joseph during the past eight years has been closed and will not be reopened. The institution was well patronized and cared for almost one thousand maternity cases during the time it was in operation. The St. Joseph Hospital will establish a maternity ward which will probably fill the needs of the community and Dr. Gray has been invited to take charge of that division of the hospital work.

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TRENTON, N. J., physicians can frank blood samples to the laboratory of the state board of health for the Wassermann test, through an arrangement between the U. S. Public Health Service and the State Bureau of Venereal Dis-

ease Control. Is there any reason why physicians in Missouri cities should not receive the same privilege? But we forget, our board of health laboratory has been transferred to the state university. Should that bar us?

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THE American Academy of Ophthalmology and Otolaryngology will hold its 1920 session in Kansas City, the birthplace and location of the first meeting of the organization twenty-four years ago. Dr. Hal Foster of Kansas City was elected vice president at the recent meeting in Cleveland and appointed chairman of the committee of arrangements for 1920 and Dr. Joseph Lichtenberg of Kansas City was appointed chairman of the committee on exhibits.

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THE Johnson Sanatorium at Springfield which was recently purchased by the Springfield Hospital has been renamed the Ozark Sanatorium and will be conducted as the mental and nervous disease department of the Springfield Hospital. Dr. W. R. Summers, who came into possession of the sanatorium after the death of its founder, Dr. Samuel A. Johnson, has recently returned from service in the Medical Corps of the Army and will have charge of the Ozark Sanatorium.

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TEN million dollars has been added to the resources of the Rockefeller Institute for Medical Research by its founder, John D. Rockefeller. This is the largest sum ever given to any institute in a single contribution and will place the Rockefeller Institute in position to extend its medical research work into many channels hitherto closed on account of insufficient financial resources. Biology, chemistry, physics, and medicine will benefit from the vast enlargement of the activities of the foundation.

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WE recently heard the dean of one of the medical schools make the unprecedented remark that the school would be forced to increase the salaries of the professors very soon. With King H. C. L. still reigning perhaps it will become a fact. At any rate the Michigan University has recently increased the salaries of their teachers 25 to 30 per cent. According to *Science* the new scale of salaries ranges from \$1,300 to \$2,100 for instructors, \$2,200 to \$2,600 for assistant professors, \$2,700 to \$3,100 for associate professors, and \$3,200 to \$6,000 for full professors. The scale applies to all colleges.

MEMBERS of the class of 1894 St. Louis Medical College, now the Medical School of Washington University, celebrated the twenty-fifth anniversary of their graduation at a reunion in St. Louis October 9. Three of the sixteen members of the original class have passed to the great beyond. The names of those who were present at the reunion follow: C. H. Bitter, St. Charles, Mo.; E. J. Goodwin, St. Louis; F. B. Hall, St. Louis; W. K. Porter, Turney, Mo.; A. F. E. Schierbaum, Hebron, N. D.; A. G. Schlossstein, St. Louis; H. W. Soper, St. Louis; Albert E. Taussig, St. Louis; E. G. Zey, Butler, Mo.

DURING September the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Abbott Laboratories: Tablets Cinchophen-Abbott 7.5 grains.

Calco Chemical Co.: Albutannin - Calco; Acetannin-Calco.

Cereo Company: Soy Bean Gruel Flour.

Gilliland Laboratories: Antipneumococcic Serum Combined Types I, II and III; Anti-streptococcic Serum.

Hynson, Westcott and Dunning: Acriflavine (Boots); Proflavine (Boots).

Merck & Co.; Albutannin-Merck.

Takamine Laboratory, Inc.: Hirathiol.

THE Missouri State Board of Health has not succeeded in obtaining the names of 100 physician volunteers to assist the board in emergency should influenza return in epidemic form this season. The board asked each county society to furnish from two to ten volunteers, but at this writing only 55 have responded. We hope this notice will induce a sufficient number of our members who have not already notified the board of their willingness to volunteer to send their names to Dr. George H. Jones, Secretary, Jefferson City. If called on the physician will receive a compensation of \$200 per month and per diem of \$4 for subsistence, together with railroad fare. If called they will serve as volunteers in the United States Public Health Service.

GOVERNOR GARDNER has appointed Judge J. G. Greensfelder of Kirkwood, Rev. E. F. Leake of Springfield and Col. J. A. Corby of St. Joseph, members of the Board of Charities and Corrections. The board recently inspected the eleemosynary institutions of the state. Mr.

J. L. Wagner, secretary of the board, announces that nearly all the circuit judges have appointed probation officers for the counties as required by the law recently enacted for the protection of children. Probation officers have not been appointed for the counties of Grundy, Mercer, Harrison, Putnam, Christian, Douglas, Stone, Taney, Ozark, Barry, McDonald and Chariton. The office of the board, formerly at Columbia, has quarters at the State House in Jefferson City.

DR. H. A. PATTISON, Field Secretary of the National Tuberculosis Society, visited St. Louis on November 4 in order to discuss with the officers of the St. Louis School for Occupational Therapy the question of instruction of its students in tuberculosis. Dr. Pattison is convinced of the great need of the use of occupations in tuberculosis sanatoria. He believes it should be a potent factor in the cure of the disease and for the happiness of the patients. The fact that the laity have a certain fear of contact with tuberculous and tuberculosis sanatoria which is entirely ungrounded makes it necessary that accurate knowledge be given to those who come in contact with the tuberculous and Dr. Pattison is anxious that all women trained for work in occupational therapy should have such knowledge and should be ready to work with the tuberculous.

OUT of a total of 23,281 newspapers and magazines of all kinds published in this country (some of which do not carry advertising) 20,000 have given their pledge to the United States Public Health Service to discontinue the advertisements of quack doctors and nostrums dealing with venereal diseases, according to an announcement from the Surgeon-General of the Public Health Service. The announcement continues:

"Most of the newspapers in the United States found it necessary to discontinue such advertising years ago because it discredited the paper as an advertising medium and without exception the papers that had adopted this policy stated it had been a means of increasing the market value of their space.

"Fortunately there are now only 140 advertising media in the United States publishing advertisements of the kind under the general ban. The boards of health in the states in which these are published have been appealed to to assist the government by taking over this activity."



A REUNION banquet of the officers and enlisted personnel of Base Hospital No. 28, was given in Kansas City at the University Club, Thursday evening, November 6. About thirty-five were present. Dr. J. F. Binnie was the toastmaster, and Serg. Neil Woodruff gave an interesting report on the state convention of the American Legion and drew attention to the advisability of a more active interest in the William T. Fitzsimmons Post of the American Legion which has secured the membership of most of the local men who were with Base Hospital No. 28. Dr. L. S. Milne brought out many points in the statistical record of the hospital during its active period at Limoges, France. Dr. C. C. Dennie spoke on the subject of keeping the interest in Base Hospital No. 28 on a fraternal basis and for the promotion of life-long friendships. Dr. E. H. Skinner, who has been placed in charge of collecting and editing the history of Base Hospital No. 28, asked that the men help by submitting items of interest and side-lights on individuals. The next reunion will be held Wednesday, Jan. 21, 1920, probably at the University Club.—*Bulletin Jackson County Medical Society.*

It is no longer necessary to argue the point with physicians that delay is the one great factor in cancer mortality for we know that at least four-fifths of cancer deaths could be prevented by early recognition; and yet statistical studies have shown that in the majority of cases the cancer patient has been "under observation" of a physician for more than a year before efficient curative treatment is instituted. During that year most of these cases have changed from curable to incurable. The medical profession must be educated to a "far keener appreciation of responsibility for the mortality from cancer than now generally exists," says the American Association for the Control of Cancer. If every physician would study and seriously apply the teaching in a hand-book for the medical profession, *What We Know About Cancer*, just issued by that association, which he can read in an hour, the question of delay in cancer would be solved in so far as it is referable to the medical profession. The education of the public would quickly follow, especially if the state board of health and other health agencies would distribute the book with other propaganda. The hand-book was printed by the American Medical Association, 535 N. Dearborn St., Chicago, from whom copies may be had at only 10 cents each.

THE Samuel D. Gross prize of \$1,500 for the successful essay on surgical pathology or surgical practice is announced by the Philadelphia Academy of Surgery. The conditions are that the essay shall not exceed 150 printed pages, octavo, in length, the work of the essayist to be founded on original investigations and candidates for the prize to be American citizens. The successful competitor must publish his essay in book form and deposit one copy of it in the Samuel D. Gross library of the Philadelphia Academy of Surgery and on the title page it shall be stated that to the essay was awarded the Samuel D. Gross prize of the Philadelphia Academy of Surgery. The essays, which must be written by a single author in the English language, should be sent to the trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 19 South Twenty-Second Street, Philadelphia, on or before Jan. 1, 1920. Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. The committee will return the unsuccessful essays if reclaimed by their writers within one year and the committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

ABOUT one hundred surgeons were present at the annual meeting of the Military Surgeons of the United States in St. Louis, October 13-14, many of them from the regular forces of the Army and Navy and a considerable number from the reserve officers not now in service but who continue their interest in military medicine and surgery. One of the interesting papers was by our fellow-member, Dr. Vilray P. Blair of St. Louis who was honorably discharged from the Medical Corps of the Army with the rank of lieutenant-colonel after rendering service that has aroused the admiration not only of Missouri physicians but of the entire medical profession. The title of his paper was, "Plan for the Immediate Care and Reconstruction of Battle Injuries of the Face and Jaws, Based on Our Late Experiences." Another address by a master in his field, who is Missouri born, held the attention of the audience and pointed the way to protect the military forces against disease when Dr. Victor C. Vaughan, Colonel in the Medical Corps of the Army, read a paper on "A Scien-

tific Basis for the Greater Resistance of the Seasoned Soldier as Compared with the Recruit to Infectious Diseases." The sessions were held at Hotel Statler except the one on the afternoon of the fourteenth which was held in the auditorium of the medical school of Washington University, the association being the guests of the university at luncheon before the meeting. After the completion of the afternoon program the members were shown about the building of the medical school and the Barnes and Children's hospitals. The next meeting will be held at New Orleans about the time the American Medical Association convenes in that city in 1920.

#### MEMBERSHIP CHANGES, NOVEMBER

##### NEW MEMBERS

Brown, T. H., St. Joseph.  
Clark, Joseph W., Liberal.  
Divine, Duke G., Appleton City.  
Higdon, E. Franklin, St. Joseph.  
Howden, T. Laurence, St. Joseph.  
Robison, W. A., St. Joseph.

##### CHANGES OF ADDRESS

Albrecht, Franklin H., Humbolt Bldg., St. Louis, to 3657 Delmar Blvd.  
Allison, N., 4917 Pershing Ave., St. Louis, to 608 Humboldt Bldg.  
Babler, Edmund A., 4826 Delmar Ave., St. Louis, to 4902 Argyle Ave.  
Baker, H. A., 6143 Brookside St., Kansas City, to 700 Rialto Bldg.  
Bishop, Thomas S., Scottsdale Stage, Ariz., to 447 W. Jefferson, Phoenix.  
Black, James M., Carrollton, Ill., to 5003 Delmar Blvd., St. Louis.  
Brandenburger, Louis A., 3514 Cleveland Ave., St. Louis, to 3922 Cleveland Ave.  
Briggs, Waldo, 25 Marina Bldg., St. Louis, to 2600 Gamble St.  
Bryan, R. S., 5461 Delmar, St. Louis, to 1354a Belt Ave.  
Burford, C. E., 650 Century Bldg., St. Louis, to Arcade Bldg.  
Caldwell, J. C., Laclede to Slater.  
Cook, Jerome E., 5389 Pershing Ave., St. Louis, to Metropolitan Bldg.  
Davis, William D., 3832 Lindell Blvd., St. Louis, to 4205 W. Pine Blvd.  
Dove, J. D., Allendale to St. Ansgar, Iowa.  
Ewing, Fayette C., 714 Century Bldg., St. Louis, to Alexandria, La.

Forsen, J. S., McCook, Neb., to Greybull, Wyo.  
Francis, H. H., Centertown to Phys. and Surgs. Bldg., St. Joseph.  
Francisco, C. B., 1227 Rialto Bldg., Kansas City, to 416 Argyle Bldg.  
Garner, K. C., Perryville to 3016a Arsenal St., St. Louis.  
Glynn, Robert, 993 Benton Ave., Springfield, to 614 Landers Bldg.  
Hall, J. R., Marshall to Fort Logan, Colo.  
Hawley, Nelson J., 410 International Life Bldg., St. Louis, to 225 Field Bldg.  
Hearst, A. L., 738 Lathrop Bldg., Kansas City, to 405 Argyle Bldg.  
Heithaus, Aloys S., 2919 Accomac St., St. Louis, to 601 Union Bldg., Cleveland, Ohio.  
Hibbard, Sherman B., Rialto Bldg., Kansas City, to 226 Lathrop Bldg.  
Hunt, Claude J., Wesley Hospital, Kansas City, to 937 Rialto Bldg.  
Jerowitz, H. D., 329 Argyle Bldg., Kansas City, to 217 Kansas City Life Bldg.  
Kennedy, A. F., 1232 Hamilton, St. Louis, to 5807 Plymouth.  
Krenning, William G., 4041a St. Louis Ave., St. Louis, to 4548 Harris.  
King, W. R., Joplin to Fort Morgan, Colo.  
La Force, H. A., Mullanphy Hospital, St. Louis, to Caffee Bldg., Carthage.  
Leonard, A. C., 607 Sharp Bldg., Kansas City, to 503 Bryant Bldg.  
Link, Joseph J., 2102 S. Grand Ave., St. Louis, to 3550 Russell Ave.  
McFadden, James F., Foxboro, Mass., to 1800 S. Compton Ave., St. Louis.  
Major, Ralph H., Bell Memorial Hospital, Rosedale, Kan., to Henry Ford Hospital, Detroit, Mich.  
Nunn, J. C., Maywood to Denver, Colo.  
Petty, W. S., Rutledge to Memphis.  
Raab, F. H., 3409 Wyandotte St., Kansas City, to 806 Rialto Bldg.  
Ramming, H., Goodwater to R. D. 1, Box 41 B, Fort Worth, Texas.  
Rhodes, J. W., Pt. Pleasant to Marston.  
Rosen, J. A., 3252 Lafayette Ave., St. Louis, to Wall Bldg.  
Schmalhorst, D. E., 5078 Maple Ave., St. Louis, to 404 Roberts Banner Bldg., El Paso, Texas.  
Schmidt, I. H., 4015 Connecticut St., St. Louis, to Faulkton, S. D.  
Sheets, Columbus C., Van Buren to Ellsinore.



Smith, George W., 520 Chambers Bldg., Kansas City, to 1111 Rialto Bldg.

Swearingen, William A., Caruthersville to Dawson Springs, Ky.

Urquhart, Wilford H., Holliday to Cairo.

Westerman, C. M., 6134 Washington Ave., St. Louis, to 909 Arcade Bldg.

Will, Leo A., Clinton, Ky., to University Club Bldg., St. Louis.

Williams, L. R., 4306 DeTonty Ave., St. Louis, to 4008 Flad Ave.

#### TRANSFERRED

Abramopoulos, C. A., San Francisco, Calif., from Jackson County Medical Society, to San Francisco County (Calif.) Medical Society.

#### DROPPED

Crank, A. C., Canton.

Ellery, W. L., LaGrange.

Ferguson, Roy H., Sante Fe, N. M.

Frame, C. N., Ewing.

Winn, R. M., Griggsville, Ill.

#### DECEASED

Adcock, J. A. B., Warrensburg.

Aber, William H., Aullville.

Bock, A. F., St. Louis.

Boulware, T. C., Butler.

Graham, James K., St. Joseph.

Henson, Lafayette, Galena.

Meredith, O. O., Breckenridge.

Smith, James W., Richmond.

## CORRESPONDENCE

### PHYSICIAN WANTED

AULLVILLE, Mo., Nov. 11, 1919.

*To the Editor:*—The recent death of my husband leaves me with his stock of drugs and professional equipment on my hands so I am writing to ask if you can assist me in finding a suitable physician to take over the practice in this town and purchase the property I have from my husband's practice. We have a high school, three churches, a bank, two large general stores, etc., in this town where most of the people own their own homes and collections are close to 100 per cent. The town is located in one of the finest agricultural districts in the state, on the Missouri Pacific Railroad, in Lafayette County, about 40 miles from Sedalia and 60 miles from Kansas City. The drug stock and office equipment will invoice about \$1,300,

but I am willing to sell at a sacrifice in order to get settled. It would be a splendid location for a young physician and his wife. Dr. Aber's practice amounted to \$2,000 and the drug store was clearing almost \$1,000.

MRS. W. H. ABER.

## MISCELLANY

### HONORABLY DISCHARGED, MEDICAL CORPS, U. S. ARMY AND NAVY

Bates, G. C., Appleton City; Bell, H. H., St. Louis; Booth, H. R., Hamilton; Bradley, J. M., St. Louis; Broadhead, W. C., St. Louis.

Clark, I. R., St. Louis; Coleman, S. R., St. Louis. Dangerfield, V. S., Luray; Dorris, R. P., St. Louis. Egbert, T. H., Kennett; Enloe, L. D., Jefferson City. Fallet, Charles E., De Soto; Florian, A. J., Kansas City; Foster, H. M., St. Louis; Freeman, J. M., St. Louis.

Harrington, G. L., Independence; Harrison, E. L., Kansas City; Hawley, Nelson J., St. Louis; Heithaus, Aloys S., St. Louis; Hunt, C. J., Kansas City.

Insley, H. W., Rich Hill.

Jacobi, F. E., St. Louis; Jurgens, H. J., Edina.

Klein, W. C., Kansas City.

La Force, H. A., Carthage; Landree, J. C., St. Louis; Lynch, Thomas J., St. Joseph.

McKittrick, O. F., Salisbury; Marder, J. L., St. Louis.

Riley, F. P., Edina; Royer, D. J., Joplin.

Schafer, J. C., St. Louis; Schorer, E. H., Kansas City; Scovern, H. B., Carrollton; Shelton, W. J., DeKalb; Smith, H. L., St. Joseph; Streeter, R. D., Moberly.

Tate, L. L., St. Louis; Thomas, H. S., Kansas City; Timberman, J. H., Marston.

Washington, L. G., St. Louis.

### REPORTING COMMUNICABLE DISEASES

It is regrettable that families, individual business proprietors and landlords urge doctors not to report contagion found on their premises. And further it is reprehensible that individual doctors do comply with such requests or make other diagnoses.

In order that any epidemic, as that of influenza, once started may be mild and as small as possible, the duty is for every person taken actually ill to consult at once a competent and honest physician, first for diagnosis and then for care. The duty of the physician is to at once isolate patient, make a specific diagnosis as early as possible and to report for quarantine to the health department, at once. Only by doing thus is the physician performing his duty to the patient, to the public at large and to himself. Any other attitude or action demands the attention of the county society and legal control by the municipal authorities. Contagion would be very much less and finally disappear if every doctor did his duty in this regard.—Jackson County Med. Soc. *Bulletin*.

### A NEW GERM FOE OF MAN

\* An investigation just completed by Surgeon Edward Francis of the U. S. Public Health Service adds another to the list of disease germs afflicting mankind. The germ which bears the name of *Bacterium*

*tularensis*, was first isolated by Drs. McCoy and Chapin, of the U. S. Public Health Service, as the causative agent in a plague-like disease of rodents. It was not then known that the same germ also infects man.

Dr. Francis now finds that *Bacterium tularensis* is the cause of "deer-fly fever," a disease occurring among the rural population of Utah and initiated (according to popular belief) by a fly bite on some exposed surface of the body. The site of the bite and the neighboring lymph glands become tender and inflamed, and they commonly suppurate. A fever, like that in ordinary blood poisoning, develops and lasts for three to six weeks. The patient becomes very sick and is confined to bed. The first case known to have ended fatally was reported in 1919.

Thus far something like two dozen cases of this disease have occurred in Millard County, Utah, in each of the years 1917, 1918 and 1919. Whether the disease prevails elsewhere is not yet known, but the announcement of the Public Health Service is expected to direct the attention of physicians to cases of this kind.

#### WORK OF LOCAL MEN IN THE MEDICAL SERVICE OF THE LATE WAR

Tuesday evening, October 7, was devoted to addresses by several members who have recently returned from foreign and domestic military service. The Hospital Unit No. 28 was represented by Drs. Binnie, Milne and M. H. Clark, while the laboratories of pathology and bacteriology, which departments did so much of real and permanent value in research and experimentation, were represented by Drs. Krall and Schorer.

Due to the modesty of the individual men, their months of absence from private practice, the many obstacles confronting them in reestablishing themselves, and to the very vastness of the problems of the past war, there is danger of our forgetting both the personal sacrifices involved and the really meritorious and even epoch making work done by these men.

It is not necessary to be personal but the local medical profession and the general public do recognize and appreciate all that was done by those who took part in this program, as well as that of their colleagues and society members, some of whom are yet in service, and others like the sainted Fitzsimmons and Tull whose great sacrifice will never be forgotten.

Lest we forget, let us refresh our minds and humbly and gratefully pay our respects to our "Unit No. 28" in its individual personnel and to every loyal member of Jackson County who was in military service for the future of America and the world.—Jackson County Med. Soc. *Bulletin*.

## SOCIETY PROCEEDINGS

#### COUNTY SOCIETY HONOR ROLL, 1919 (UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Madison County Medical Society, Dec. 14, 1918.  
Webster County Medical Society, Dec. 23, 1918.  
Cedar County Medical Society, Dec. 30, 1918.  
Pike County Medical Society, Jan. 8, 1919.  
Vernon County Medical Society, Jan. 20, 1919.  
Chariton County Medical Society, Jan. 25, 1919.

Wayne County Medical Society, Feb. 12, 1919.  
Camden County Medical Society, Feb. 14, 1919.  
Atchison County Medical Society, Feb. 26, 1919.  
Ralls County Medical Society, Feb. 27, 1919.  
Ste. Genevieve County Medical Society, Feb. 27, 1919.  
Nodaway County Medical Society, March 24, 1919.  
Laclede County Medical Society, March 31, 1919.  
Oregon County Medical Society, April 7, 1919.  
Cass County Medical Society, April 16, 1919.  
Adair County Medical Society, April 17, 1919.  
Cape Girardeau County Medical Society, May 8, 1919.  
Newton County Medical Society, May 12, 1919.  
Carroll County Medical Society, July 2, 1919.  
Greene County Medical Society, July 2, 1919.  
Clay County Medical Society, July 8, 1919.  
Johnson County Medical Society, Aug. 20, 1919.  
Pettis County Medical Society, Aug. 25, 1919.  
Dallas County Medical Society, Sept. 11, 1919.  
Dent County Medical Society, Sept. 17, 1919.  
Phelps County Medical Society, Oct. 2, 1919.  
Barton County Medical Society, Oct. 11, 1919.  
Platte County Medical Society, Oct. 22, 1919.  
Scott County Medical Society, Oct. 29, 1919.

#### ST. LOUIS MEDICAL SOCIETY

##### Meeting of the Council July 8, 1919

The regular meeting of the Council, which was postponed from the second Wednesday in June, was called to order at 8:30 p. m., July 8, by the chairman, Dr. William Engelbach.

The minutes of the previous meeting were read and approved.

Dr. Hamel reported the action of the House of Delegates of the Missouri State Medical Association in adopting an amendment to the By-Laws whereby dues for members who become permanently incapacitated can be remitted by the State Association when remitted by the local society.

The treasurer's report and the report of the Bartscher Fund Committee were consulted and as the report of the treasurer showed a balance of \$639.56 on hand and the bills amounted to \$1,104.15, it was moved, seconded and carried that \$1,000 of the income fund of the Bartscher Fund be transferred to the principal fund of the society and the bills be paid.

A letter from Dr. Meredith R. Johnston resigning from the society on account of joining the Regular Army, was read. Dr. Johnston's resignation was accepted.

The secretary read a letter from the Carondelet Printing and Publishing Company stating that they would be compelled to raise the price of printing the *Bulletin* from \$15 per week to \$18 per week on account of the high cost of labor and material. The secretary was instructed to investigate this and make a new contract with the Carondelet Printing and Publishing Company.

Dr. Vogt read the report of the Membership Committee recommending the following applicants for active membership: Cecil H. Baker, 2905 Cherokee Street; Leroy W. Davies, City Hospital; Henry N. DeMenil, 3606 Page Avenue; Roy Johnson, Ferguson, Mo.; Clarence W. Rhea, 800 Third National Bank Building; Harry Rich, 2836 Dayton Avenue; John P. Ryburn, City Hospital; Harry A. Upshaw, 4275 Juniata Street; Orin T. Upshaw, Grand and Gravois Avenues; Vincent L. Jones, 414 Wall Building.

The applicants were voted on collectively and all elected.



The application of Dr. Vincent L. Jones for active membership by transfer from the Omaha-Douglas (Nebraska) Medical Society was read for the second time and Dr. Jones was elected.

Dr. Baumgarten read the report of the Library Committee. The report was adopted.

Dr. Baumgarten asked if the library might participate in the fund to help defray the expenses incurred by Dr. Rainey in making two trips to Europe on behalf of American libraries. On motion this was allowed.

The Library Committee was authorized to join in suit against G. E. Stechert and Company if other libraries brought suit against them.

The secretary reported that Joel W. Hardesty had joined Marion County (Mo.) Medical Society in 1916 while delinquent in this society and did not obtain a transfer, and has not been affiliated with the St. Louis Medical Society since that time. Dr. Hardesty's name was ordered dropped from the roll of members.

An application for corresponding membership from Dr. G. C. Eggers of Clayton, Mo., was read. On motion Dr. Eggers was elected.

Dr. Smith reported orally for the House Committee and recommended that a new Service Flag be purchased.

On motion this was left to the discretion of the House Committee.

Councilors present: Drs. Falk, Gayler, Hamel, Reder, Rehfeldt, Elsworth S. Smith, Tupper, Engelbach and Koetter.

Councilors absent: Drs. Bliss, Boisliniere, Caulk, Funkhouser, Graves and Gundlach.

Visitors present: Drs. Pfingsten, Baumgarten and Vogt.

ALBERT F. KOETTER, Secretary.

#### Meeting of Oct. 14, 1919

The meeting was called to order at 8:35 p. m. by the President, Dr. William Engelbach. The minutes of the previous meeting were read and approved.

Dr. F. J. Taussig introduced the guests of the evening, Col. W. F. Snow of San Diego, Calif., and Capt. R. L. Russell of Jefferson City, Mo.

Colonel Snow read a paper on "The Control of Venereal Disease in Civil Life."

Captain Russell read a paper on "The Government's Program for Venereal Disease Control."

Discussion by Dr. M. C. Woodruff, Rev. George Dodson, Mr. Percy Werner, Dr. Martin F. Engman and Dr. Henry J. Scherck; Colonel Snow closing.

A letter from Dr. Fred T. Murphy resigning from the society, which was referred to the General Society by the Council, was read.

Dr. Graves moved that Dr. Murphy be elected an honorary member of the society. Seconded and carried.

Attendance 142.

#### Meeting of Oct. 21, 1919

The scientific program consisted of the following: "The Hand: Roentgen Notes," by Dr. G. C. Briggs.

Discussion by Drs. Miles B. Titterington, Edwin E. Ernst; Dr. Briggs closing.

"Nine Observations on the Unusual Case of Foreign Body in the Trachea," by Dr. William S. Barker.

Discussion by Drs. Isaac D. Kelly, Armin C. Gundlach, Willis Young, Louis C. Boisliniere, E. Lee Myers, W. D. Black, C. F. Pfingsten, T. Wistar White and Rudolph S. Vitt; Dr. Barker closing.

"On the Treatment of Certain Carcinomata of the Face, Lips and Jaws. From the Surgical Service of the Barnard Free Skin and Cancer Hospital," by Dr. Ellis Fischel.

Discussion by Drs. William T. Coughlin and W. E. Leighton; Dr. Fischel closing.

Dr. Koetter moved that the St. Louis Medical Society join the St. Louis Pediatric Society in extending an invitation to the American Child Hygiene Association to hold its 1920 convention in St. Louis. Seconded and carried.

Attendance 102.

#### Meeting of Oct. 28, 1919

The meeting was called to order at 8:45 p. m., Dr. A. H. Hamel presiding in the absence of the president and vice presidents. The minutes of the previous meeting were read and approved.

Dr. Dock announced that the Southern Medical Association would hold its annual meeting at Asheville, N. C., Nov. 10 to 13, 1919.

The scientific program consisted of the following: "The Role of the Vasomotor Response in Hypertension," by Dr. Elsworth S. Smith.

Discussion by Drs. Llewellyn Sale, George Dock, Frank R. Fry, J. Curtis Lyter, Jerome E. Cook; Dr. Smith closing.

"Essentials of the Carrel-Dakin Treatment of Infected Wounds," by Dr. H. E. Happel.

Discussion by Drs. Fred Bailey, W. T. Coughlin, W. C. G. Kirchner, John C. Morfit, Robert D. Alexander, Norvelle Wallace Sharpe, Marsh Pitzman, Oliver B. Zeinert; Dr. Happel closing.

Attendance 103.

ARTHUR GUNDLACH, M.D., Assistant Secretary.

#### BATES COUNTY MEDICAL SOCIETY

Bates County Medical Society met in Butler, October 18, with ten members present.

Dr. G. Wilse Robinson of Kansas City lectured on "Neuritis, Its Etiology, Pathology, Symptomatology and Treatment." The lecture was highly appreciated by all present and the subject was thoroughly discussed and many points of interest were brought out.

Dr. C. C. Conover of Kansas City was next on the program and gave a lecture on "Postinfluenza of Lung." This was an excellent lecture, accompanied by photographic slides, so that the disease features were fully explained. The doctor showed himself a master of the subject and gave us a thoughtful and highly instructive lecture.

G. W. BERRY, M.D., Secretary.

#### BUCHANAN COUNTY MEDICAL SOCIETY

The scientific session of the Buchanan County Medical Society was held at the Commerce Club Rooms, Wednesday evening, October 15, with sixty-three members present.

The program of the evening consisted of a paper by Dr. H. R. Ravold on "Pneumopertioneum," a new method of roentgen-ray examination for the diagnosis of intestinal lesions. It was illustrated by roentgenograms and lantern slides.

We were very much favored by the presence of Dr. Orndorff of Chicago and Dr. McCandless of Kansas City, who discussed the paper and contributed largely to the subject from their own experiences and observations, which have been very extensive.

On motion a vote of thanks was tendered the visiting doctors.

W. F. GOETZE, M.D., Secretary.

**Meeting of October 31**

A called meeting of the Buchanan County Medical Society was held at St. Joseph, October 31, with the president, Dr. A. B. McGlothlan, in the chair. Forty-two members were present.

The subject under consideration was the indorsement of a free venereal clinic to be established in St. Joseph under the auspices and partial support of the federal government.

After considerable discussion it was resolved that the discussion be completed at some future meeting at which a representative of the government could be present to fully explain the proposition.

W. F. GOETZE, M.D., Secretary.

**Meeting of November 5**

The regular business meeting of the Buchanan County Medical Society was held at the Commerce Club, November 5, with the President, Dr. A. B. McGlothlan, in the chair. Twenty-nine members were present. The minutes of the previous meeting were read and approved. Bills were presented and warrants ordered drawn on the treasurer to pay them.

Clinical films as announced on the program were displayed and Captain Hough, an officer of the United States Public Health Service, outlined and explained the government's work in connection with the establishment of a free venereal clinic in St. Joseph. The proposition having been put to a vote it was unanimously agreed that the Buchanan County Medical Society would cooperate with the federal officers in combating venereal diseases. On motion a vote of thanks was extended to Captain Hough for his interesting demonstration and address.

There being no further business before the society the meeting adjourned.

W. F. GOETZE, M.D., Secretary.

**JACKSON COUNTY MEDICAL SOCIETY****Twentieth Meeting, October 7**

The Jackson County Medical Society held the twentieth meeting of the year Oct. 7, 1919.

The meeting was called to order by the president, Dr. VanEman, at 8 p. m.

The reading of the minutes of the last meeting was postponed.

The scientific program consisted of the following: "Advances in Medicine and Surgery During the Great War," by J. F. Binnie.

"Medical Notes on the Great War," by L. S. Milne. "War Anesthesia as Applied to Anesthesia in Civil Life," by M. H. Clark.

This program was followed by a general discussion. The general meeting adjourned to an executive session.

The report of the Hospital Committee on the Hospital and Health Conditions in Kansas City was read and unanimously approved.

Attendance, 65.

R. E. CASTELAW, Secretary, pro tem

**Twenty-First Meeting, October 14**

The Jackson County Medical Society held the twenty-first meeting of the year Oct. 14, 1919, at the Christian Church Hospital.

The following clinical program was given by the staff of the Christian Church Hospital: "New Breast Flap," Dr. Jabez N. Jackson; "Dysentery, Rickets, Lues," Dr. Frank Neff; "Corrected Paralytic Club

Foot," Dr. Frank Dickson; "Bladder Stone," Dr. F. M. McCallum; "Perinephritic Abscess with Renal Calculus," Dr. B. A. Poorman; "Spinal Cord Injury," Dr. H. S. Teachenor; "Gonorrheal Proctitis," Dr. H. S. Valentine; "Artificial Pneumothorax," Dr. W. W. Duke; "Syphilis of the Lung and Concato's Disease," Dr. C. C. Conover; "Hospital Maternity Statistics," Dr. C. A. Ritter; "Hematogenous Kidney," Dr. B. G. Hamilton; "Empyema Antrum Highmore, Streptococcic Mastoid," Dr. Samuel Roberts; "Pneumoperitoneum," Drs. O. H. McCandless and J. G. Montgomery; "Brain Tumor," Dr. A. L. Skoog; "Luetic Choroidoretinitis," Dr. A. W. McAlester; "Fracture of the Patella," Dr. E. P. Hamilton.

Attendance 100.

**Twenty-Second Meeting, October 21**

The Jackson County Medical Society held the twenty-second meeting of the year Oct. 21, 1919, in the Library rooms. The meeting was called to order by the President, Dr. Van Eman, who gave the chair to Dr. Mosher, Chairman of the Obstetrical Section.

The following scientific program was given:

"The Prevention of Complications in Pregnancy and Labor," by Prof. Grandison D. Royston, Medical Department of the Washington University, St. Louis. "Control of Venereal Diseases of Women in Detention Homes in War and Peace," by Prof. Palmer Findley, Medical Department of the University of Nebraska, Omaha.

Attendance 110.

**Twenty-Third Meeting, October 28**

The Jackson County Medical Society held the twenty-third meeting of the year Oct. 28, 1919, in the Library rooms. In the absence of the president, Dr. Van Eman, the meeting was called to order by Dr. E. H. Skinner.

The following scientific program was given:

"Newer Developments of Roentgenology in Internal Medicine," by Dr. James T. Case, President of the American Roentgen Society, Battle Creek, Mich.

"The Place of the Roentgen-Ray Examination in the Study and Control of Chest Disease," by Dr. J. Stuart Pritchard, Battle Creek, Mich.

Attendance 126.

**Twenty-Fourth Meeting, November 4**

The Jackson County Medical Society held the twenty-fourth meeting of the year Nov. 4, 1919, in the Library room. In the absence of the President, Dr. Van Eman, the meeting was called to order by Dr. William Frick. The reading of the minutes of the previous meeting was postponed.

The following scientific program was given:

"Neurocirculatory Asthenia," by S. H. Snider. Discussion by Drs. Milne, Kuhn and Clendening.

"Thyroid Response to Overstrain," by G. H. Hoxie. Discussion by Drs. Krall, Kuhn, Snider, Sheldon and Clendening.

Dr. W. F. Kuhn moved that the following resolutions be made a special order of business at the regular meeting of the society Nov. 18, 1919. Seconded by Dr. Hoxie. Carried.

WHEREAS, Realty values in the neighborhood of Thirty-First and Gillham Road have greatly advanced in recent months, and

WHEREAS, Several bids are now in the hands of the Council either for sale or lease of the property owned by the society; therefore, be it



*Resolved*, By the Jackson County Medical Society in regular session, that the president and secretary of said society be authorized to make such sale or lease of the property as shall be recommended by the Council; be it further

*Resolved*, That the Council is hereby given full power to act for the society in the matter of disposing of said property during a period not to exceed — months or days from the date of the adoption of these resolutions.

#### Council Proceedings

The regular meeting of the Council of the Jackson County Medical Society was held October 28, at 7 p. m., in Room 1010 Rialto Building.

Councilors present: Drs. Van Eman, Miller, Lowe, Trask, Frick, Castelow, Frankenburger.

Councilors absent: Drs. Schaffler and Chambers.

Moved by Drs. Castelow and Lowe that the reading of the minutes be postponed. Carried.

The following were elected to membership: E. J. Curran, 401 Waldheim Building; R. L. Hodge, 909 Rialto Building; J. L. Myers, 626 Lathrop Building, transfer from Wyandotte County, Kan.; B. M. Colby, 404 Bonfils Building, transfer from Buchanan County, Mo.; O. W. Swope, 929 Rialto Building, transfer from Sedgwick County, Kan.

A communication was read regarding the sale of the property owned by the Jackson County Medical Society. Moved by Drs. Castelow and Frankenburger that the matter be presented at an early date to the society for consideration and instruction. Carried.

Moved by Drs. Trask and Frick that the secretary issue a questionnaire to members for the compilation of the archives of the society during the great war. Carried.

Moved by Drs. Frankenburger and Trask that the secretary be instructed to use the print of the seal of the society on the stationery. Carried.

HUGH MILLER, M.D., Secretary.

#### MARION COUNTY MEDICAL SOCIETY

The regular meeting of Marion County Medical Society was held at Hannibal, November 7, at 8 p. m., Dr. John J. Bourn, the president, in the chair. There were also present Drs. Hornback, Hays, Hill, Roselle, Chilton and Ross.

Dr. Bourn reported the case of a man caught between two cars on August 11, producing a comminuted fracture of pelvis in three places and the bladder and prostatic urethra torn. He opened the abdomen and passed a catheter through the urethra from the bladder. The patient pulled the catheter out. The doctor opened the perineum and the patient did well until infection invaded the right kidney and caused chills. He recovered and is now going about and doing well.

Dr. Thomas A. Roselle of Palmyra reported an interesting case of what seemed to be pneumonia without fever. The patient felt chilly but had no chill; accelerated respiration, right apex involvement and much cough with much rusty and bloody sputum; pulse 120, temperature normal or subnormal. Sore over right lung, quite a little depression and very nervous. On the evening of November 4 he delivered her and she felt much better for ten or twelve hours after the birth of the child. It was her second child and she is about 30 years old. The doctor has had similar cases without temperature for two or three days and then a rise of temperature with secondary involvement.

Dr. William H. Hays described a very large aorta with much thickened walls, the common iliacs as large as his thumb, in a woman with general ptosis of the viscera. Systolic blood pressure 170; Wassermann negative; urine negative. She was frequently nauseated and would empty her stomach by putting her finger in her mouth to induce vomiting.

Dr. Roselle described a large fleshy woman, almost at term, who was dying when he entered the room. She had had a slight cold and woke choking at 3 a. m. She rose but could not get back to bed without help. She had a small goiter. Bloody froth was coming from her mouth and nose. Her urine had been negative three or four weeks ago. The baby was not alive.

MARY S. ROSS, M.D., Secretary.

#### SHELBY COUNTY MEDICAL SOCIETY

Following the regular meeting of the Shelby County Medical Society in Shelby on Tuesday night, September 16, a banquet was given in honor of the members who served in the army, who were as follows: Drs. S. M. Hall and D. E. Singleton of Clarence; A. M. Wood of Lentner, L. L. Smith of Bethel, and R. S. Battersby and Florian Vaughn of Shelby. Another member of the profession, Dr. George E. Farr of Shelbyville, was in the service and fell a victim to the influenza epidemic while in camp at Brownsville, Texas, Oct. 30, 1918.

The banquet was held in the basement of the Baptist Church and was served by the ladies of the church. Dr. L. L. Smith was toastmaster. In addition to the regular members of the society and their wives, the following invited guests were present: W. O. Jewett and wife, W. M. Honley and wife, Rev. A. Vollmer and wife, and Dr. Smith and wife of Paris, Mo.

Those on the musical program were Mrs. E. M. Codwell and Miss Frances Hickman of Shelbyville. Miss Ruth Bryan, Miss Ricie Maupina and the Shelby Ladies' Orchestra. Splendid music was rendered throughout the evening consisting of vocal and instrumental solos and selections by the orchestra.

Dr. C. E. Saylor, president of the society, gave the address of welcome, which was responded to by Dr. F. K. Roy and Dr. A. M. Wood. An address, "The Doctor's Creed," was given by Dr. H. C. Vaughn, which was responded to by Dr. J. D. Smith. This was followed by general talks by members of the profession and also talks by Rev. Vollmer and Mr. Hanly. Also an address, "The Doctor's Wife," by Mrs. Battersby.

#### ST. LOUIS COUNTY MEDICAL SOCIETY

In the absence of the president and vice president the meeting was called to order by the secretary at 3:30 p. m., October 8, and Dr. Townsend elected temporary chairman. The minutes of the previous meeting were read and approved. Members present: Drs. Sutter, Dunnavant, J. H. Armstrong, O'Malley, Meisch, Jones, Davis, Reynolds, Corley, Denny, Brossard, Dunn, Trumpour, Townsend, Conway, Baker, Miles, Wyer. Visitors: Drs. L. C. Boisliniere of St. Louis and P. N. Davis.

The secretary announced the issuance of a transfer card to Dr. F. C. Ewing, who has located at Alexandria, La., and desired to join the county society there.

After the transaction of the ordinary routine business, Dr. L. C. Boisliniere, superintendent of the Mount St. Rose Sanatorium, St. Louis, addressed the society on the "Genesis, Diagnosis and Treatment of Tuberculosis." His subject was most ably presented from a practical and scientific standpoint and every auditor benefited by hearing it.

ARTHUR CONWAY, M.D., Secretary.

### WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met at Mansfield, Thursday, Nov. 6, 1919, at 2 p. m., in the office of Dr. J. A. Fuson, with the President, Dr. R. A. Ryan, in the chair.

Dr. A. C. Ames of Mountain Grove read a very interesting paper on infection. The paper was thoroughly discussed and very highly praised by all present.

By a unanimous vote it was decided to invite the members of Howell and Texas County Societies to meet with us in Mountain Grove at our next regular meeting in February, 1920.

A communication from the secretary of the State Board of Health was read, asking for volunteers in case of another epidemic of influenza. The proper number of volunteers was secured.

The election of officers for the ensuing year resulted as follows: President, J. A. Fuson, Mansfield; vice president, R. M. Norman, Ava; secretary and treasurer, A. C. Ames, Mountain Grove; delegate, A. C. Ames, Mountain Grove; alternate, L. T. Vanoy, Norwood; censor three years, B. E. Latimer, Hartville; censor two years, H. U. Daugherty, Mountain Grove.

There being no further business the society adjourned to meet in Mountain Grove the first Thursday in February, 1920. J. A. FUSON, M.D., Secretary.

## THE TRUTH ABOUT MEDICINES

### NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies 1919, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

**TYPHOID PARATYPHOID BACTERIAL VACCINE, IMMUNIZING-GILLILAND.**—Marketed in packages of three 1 Cc. ampules, one containing 250 million each killed paratyphoid A and B and 500 million killed typhoid bacilli, and two containing 500 million each killed paratyphoid A and B and 1,000 million killed typhoid bacilli, and in packages of three 1 Cc. syringes, one containing 250 million each killed paratyphoid A and B and 500 million killed typhoid bacilli, and two containing 500 million each killed paratyphoid A and B and 1,000 million killed typhoid bacilli. Gilliland Laboratories, Ambler, Pa. (*Jour. A. M. A.*, Oct. 11, 1919, p. 1137).

**HIRATHIOL.**—An aqueous solution of a synthetic product, the important medicinal constituents of which are ammonium compounds containing sulphur in the form of sulphonates, sulphones and sulphides. It is claimed that hirathiol is equivalent in every respect to the original ichthyol; hence, its actions, uses and dosage should be similar to that of the older preparation (see Sulphoichthyolate Preparations, New and Nonofficial Remedies, 1919, p. 319). Hirathiol is a syrupy, brownish-black liquid, having a characteristic empyreumatic odor. It is soluble in water, glycerin and alcohol. It is miscible with fats. Takamine Laboratory, Inc., Clifton, N. J.

**SOY BEAN GRUEL FLOUR.**—A flour prepared from the soy bean, having approximately the following composition: protein, 44; fat, 20; sucrose, 10; ash, 4.3; fiber, 2; water, 4.6. Soy bean gruel flour may be used for preparing muffins. It is indicated in cases in which a diet relatively free from carbohydrates is desired, as in diabetes, amylaceous dyspepsia, etc. It has also been suggested for the diet in obesity. Cereo Company, Tappan, N. Y. (*Jour. A. M. A.*, Oct. 18, 1919, p. 1215).

**ANTISTREPTOCOCCIC SERUM-GILLILAND.**—The serum of horses which have been immunized with virulent strains of hemolytic streptococci. Each package bears the statement "No U. S. Standard of Potency." Marketed in 10 Cc. syringes, 20 Cc. injecting packages and 50 Cc. injecting packages. Dose: 10 to 200 Cc. (see New and Nonofficial Remedies, 1919, p. 272). Gilliland Laboratories, Ambler, Pa. (*Jour. A. M. A.*, Oct. 25, 1919, p. 1287).

### PROPAGANDA FOR REFORM

**FORMALDEHYDE TABLETS.**—During the recent influenza epidemic a variety of tablets or lozenges were advertised which were claimed to owe their asserted value to the fact that they contained formaldehyde and liberated it on contact with the saliva. Tablets containing hexamethylenamine or other formaldehyde compounds can neither cure respiratory infection, nor even confer a protection against such infection. To be effective, formaldehyde would need to be supplied to the entire respiratory tract continuously for some time, or else in concentrations that would be distinctly irritant and damaging to the tissues. Some years ago, the Council reported on the inefficiency of Formanint, which was said to be an efficient germicide by virtue of the liberation of formaldehyde on contact with the saliva. To call attention to the inefficiency of this form of medication, the Council on Pharmacy and Chemistry now reports that the following were found inadmissible to New and Nonofficial Remedies: Hex-Iodin (Daggett and Miller Company, Inc.), Formotol Tablets (E. L. Patch Company) and Cin-U-Form Lozenges (McKesson and Robbins) (*Jour. A. M. A.*, Oct. 4, 1919, p. 1077).

**SOLUBILITY OF INTESTINAL IPECAC PREPARATIONS.**—T. Sollmann reports that in the administration of ipecac preparations against intestinal amebas, salol coated pills are not always satisfactory, although with due care, it appears quite feasible. He reports that emetin bismuth iodid, which is described in New and Nonofficial Remedies, is only slightly soluble in water and dilute acid, but dissolves quite freely in 1 per cent. sodium bicarbonate solution. It is somewhat soluble in the stomach and produces some digestive disturbances. Alcresta ipecac, an adsorption product of ipecac and fuller's earth, though sold with the claim that the alkaloids are "physiologically inert as long as they remain in the stomach, and are rendered active when set free in the alkaline media of the intestine," was found by Sollmann not to be decomposed with liberation of alkaloid by solutions having the alkalinity of the intestinal fluid. Ordinarily, it would not be expected that a substance which is quite insoluble in the intestines should still be effective on amebas. The findings of Sollmann demand a careful examination of the clinical evidence on which the use of alcresta ipecac is based (*Jour. A. M. A.*, Oct. 11, 1919, p. 1125).

**MORE MISBRANDED NOSTRUMS.**—Rubino Healing Springs Lithia Water was found misbranded under the Federal Food and Drugs Act because it did not contain enough lithia to entitle it to the name "lithia



water" and because of false claims as to its therapeutic value. Lower's Hot Springs Pure Blood Remedy was declared misbranded because it was falsely represented to be a treatment or remedy for syphilis, paralysis, catarrh, eczema, malaria and other diseases. Analysis showed it to be a weak alcoholic solution containing sugars, small amounts of chlorides, iodides and sulphates (probably as the sodium salt), and vegetable extractives, among which are podophyllum and an atropin-bearing drug. Kuhn's Rheumatic Specific was declared misbranded because it was sold as a cure for all forms of rheumatism, neuralgia, blood diseases, lumbago, etc. It was found to be a water-alcohol solution containing essentially potassium iodid, iodin and sugar with indications of small amounts of plant material and aromatics. Schade's Specific and Female Regulator was declared misbranded because the therapeutic claims for this "female regulator" were found false. It was a water-alcohol solution containing chiefly sugar, aromatics, essential oils, licorice and bitter plant extractives (*Jour. A. M. A.*, Oct. 11, 1919, p. 1151).

**THE WILLIAM A. WEBSTER COMPANY AND THE DIRECT PHARMACEUTICAL COMPANY.**—The Direct Pharmaceutical Company of St. Louis is apparently merely a sales agency for the William A. Webster Company of Memphis, Tenn. In government bulletins issued in October, 1913, there were reported some cases of adulteration and misbranding on the part of the William A. Webster Company. In a similar bulletin issued in August, 1914, there were reported several more cases of adulteration and misbranding charged against the William A. Webster Company. In a government bulletin issued in June, 1917, the same company was charged with adulterating and misbranding Aspirin tablets (*Jour. A. M. A.*, Oct. 18, 1919, p. 1231).

**AN UNCRITICAL ENGLISH ENDORSEMENT OF COLLOSOLS.**—Under the auspices of the English Association for the Advancement of Science, there has appeared a report on the present status of colloidal chemistry. A chapter on the "Administration of Colloids in Disease" is devoted largely to the "Collosols," proprietary preparations made by the Crookes Laboratory. In it, the advertising "literature" of the Crookes concern appears to have been considered ample source of information. In the United States the medical profession has been informed by the Council on Pharmacy and Chemistry that a number of the "Collosol" preparations were not colloids at all "if . . . injected intravenously as directed, death might result, making the physician morally if not legally liable." The Council also reported that in cases in which the therapeutic claims were examined, the claims were improbable or exaggerated and that "Collosol Cocaine" did not contain the claimed amount of cocain (*Jour. A. M. A.*, Oct. 18, 1919, p. 1218).

**THE PATENTING OF NEW THERAPEUTIC AGENTS.**—Enterprising pharmaceutical manufacturers have usually been ready to appropriate the results of scientific research by investigators or therapeutic measures suggested by practicing physicians. Not infrequently, in such cases, the desire for financial gain has caused the marketing of such products with extravagant, if not false, claims as to their value. Therefore, though it is unethical for physicians to receive remuneration from patents on medicines or instruments, it is important that new therapeutic agents discovered in our research institutions be protected by patenting them and thus to so control them that they may be available without subordination to commercial interests. In 1914, the House of Delegates of the Amer-

ican Medical Association passed a resolution to the effect that the board of trustees of the Association should accept at its discretion a patent on a medicine or surgical instrument, as trustee, for the benefit of the profession and the public, provided that neither the Association nor the patentee should receive remuneration for this patent. The Rockefeller Institute for Medical Research has solved the problem in a similar manner. Certain products discovered there have been patented. It is proposed to permit the manufacture of such discoveries under license by suitable chemical firms and under conditions which will insure the quality of the drugs and their marketing at reasonable prices. It is further announced that the Institute will not receive any royalties or pecuniary benefits from the licenses it issues (*Jour. A. M. A.*, Oct. 18, 1919, p. 1219).

**ANASARCIN ADVERTISING.**—Dr. Louis Heitzman reports that charts and part of the text of a book by him is being used as advertising by the Anasarcin Company, and that his publishers think that, in spite of the violation of copyright, nothing can be done. Knowing the standards of ethics the Anasarcin Company adopts in the exploitation of its ridiculous squill mixture "Anasarcin," the appropriation of copyrighted material is not surprising. However, something can be done by those who hold the copyright (*Jour. A. M. A.*, Oct. 18, 1919, p. 1232).

**P. PRESTO COMPANY.**—This company, also known as "The Presto Manufacturing Company" and "The Presto Company," was a mail order concern operated from Albany, Ore., by one Edward F. Lee. Lee is now in the penitentiary, and the Presto Company has been debarred from the U. S. mails. Lee's business was that of selling on the mail order plan what he termed his "New Method Treatment for Sexual Weakness and Varicocele in Men" (*Jour. A. M. A.*, Oct. 25, 1919, p. 1302).

**AN INSIDIOUS INFLUENCE.**—A knock at the door. A gentleman with a grip full of samples and literature is ushered in. After a pleasant chat in which you are "informed" about the action of the particular remedies in which he is interested, he leaves you samples and departs. You turn to New and Non-official Remedies and find no mention of his remedy. Why? Because the Council on Pharmacy and Chemistry of our national organization has investigated the article and found sound reason why it should not be used by the profession, or else, the manufacturer did not deem it advisable even to submit the article (*Minnesota Medicine*, September, 1919, p. 355).

**A PHARMACEUTICAL CLEARING HOUSE.**—The Council on Pharmacy and Chemistry of the American Medical Association is carrying on a work of great usefulness to doctor and layman. Actuated by no selfish interests, condemned by designing sharks who wish to exploit their frauds, and ridiculed by the jealous manufacturers of pharmaceuticals, the Council pursues the even tenor of its labors, playing no favorites, exposing frauds wherever found, and awaiting not the stamp of approval, of praise, or of gratitude from any one. This "clearing house" is the medium through which physicians may learn the unvarnished, straightforward truths about proprietary products. A plea of ignorance of proprietary articles used does not excuse the physician, since it is his duty to follow the course of instruction offered by the Council and to appeal to this clearing house for information (*Southern Medical Journal*, September, 1919, p. 581).

## BOOK REVIEWS

**GERIATRICS.** *A Treatise on Senile Conditions, Diseases of Advanced Life, and Care of the Aged.* By Malford W. Thewlis, M. D. St. Louis: C. V. Mosby Company, 1919. Price, \$3.

The author has selected for his subject a much neglected but important field of medicine and no doubt his prophecy that more attention will be given to the proper care of the aged will be fulfilled in the future. The book is a series of monographs with clinical presentation of cases and the personal views of the author. An introductory note by Dr. Abraham Jacobi, the pioneer in pediatrics, is of interest and helps to establish a relationship between pediatrics and geriatrics. This book should prove of considerable practical value and interest to both physician and layman. It has a fairly complete bibliography.

F. D. G.

**THE PERITONEUM.** Vols. I and II. *Structure and Function in Relation to the Principles of Abdominal Surgery.* By Arthur E. Hertzler, M.D., F.A.C.S., Surgeon to the Halstead Hospital, Halstead, Kan.; Associate Professor of Surgery, University of Kansas. St. Louis: C. V. Mosby Company, 1919. Price, \$10.

In most textbooks the chapter devoted to the consideration of the peritoneum can be read and digested in an evening. It was not until this monograph of two volumes reached the reviewer that he believed it possible for an author to fill 870 pages with most interesting reading and well-executed illustrations on a subject which hitherto has received such scant consideration. From a feeling that the peritoneum is possibly an annoying anatomical necessity prone to occasional adhesions and violent reactions against foreign invasion one is gradually quite converted to the author's idea that it is an intra-abdominal organ of most vital importance and well worth our deep respect and close study; and one is grateful for that persistence and patience which enabled its champion to conduct endless experiments, explore long accepted theories and misconceptions of the development, physiology, pathology and repair of this protective membrane.

Volume I in nine chapters reviews at length the physiology, histology, development, gross anatomy, wound healing, nature and genesis of peritoneal adhesions and their prevention, circulatory changes and inflammatory reaction of the peritoneum.

The chapter on gross anatomy is an exhaustive study, beautifully illustrated by Tom Jones' drawings made from life. The author has tactfully merged into his treatise a liberal amount of anatomical variations and diseased conditions of organs adjacent to and protected by this membrane, and one is persuaded that the interests of the peritoneum and its contiguous organs are inseparably associated and interdependent.

The chapters on the nature and genesis of the peritoneal adhesions and their prevention are indicative of much study and experimentation, and merit careful rereading.

Chapters 10 to 18, inclusive, deal with acute peritonitis and its classification, etiology, pathogenesis, symptomatology, diagnosis, prognosis, cause of death, treatment and operation.

Chapters 19 to 25, inclusive, deal with the peritonitis of appendicitis, cholecystitis, gonococcus, pneumococcus, puerperal, traumatic, fetal, and tuberculous involvement.

Thrombosis and embolism of mesenteric vessels, diseases and injuries of the great omentum, and tumors of the peritoneum furnish the subject matter of the three closing chapters.

Basing our judgment on our previous knowledge of the peritoneum and its vagaries, this work as a whole is a very welcome addition to medical literature and the author's efforts merit success. The surgical literature has been well studied and due credit given throughout the monograph but much original work is modestly presented in each chapter. F. W. B.

**MENDERS OF THE MAIMED.** *The Anatomical and Physiological Principles Underlying the Treatment of Injuries to Muscles, Nerves, Bones and Joints.* By Arthur Keith, M.D. (Abdn.), Conservator of the Museum and Hunterian Professor Royal College of Surgeons, England. London: Oxford University Press, Warwick Square, E. C. American Branch, 35 West 32d Street, New York, N. Y., 1919. Price, \$6.50.

Here we have an example of the value of medical history and how it can be highly instructive in practical knowledge. The subject is admittedly presented "from a British point of view" and is happily free from the dryness of a purely historical array of dates, facts, and names. Quite contrariwise, it is written in attractive style and the comprehensive viewpoint of the author stands out prominently throughout the entire book. The following quotation from page 2 may be considered a fair sample: "In his closing years came a knowledge of oxygen, of combustion, of respiration, of oxidation of the tissues, of heat and temperature—knowledge which threw much of Hunter's best work into the realm of pure history. Then later, in 1839, began the revolution of the microscope, which gave anatomists and physiologists their atomic theory. The result of that revolution was to make us think in terms of living cells. Hunter always thought in terms of living structures, tissues, and organs. Then, finally, came the great Pasteur-Lister revolution; problems which Hunter had struggled to solve—problems of inflammation, infection, and repair—were finally fixed on a new basis of knowledge, thus another section of Hunter's life's work lost its currency. The great evolutionary movement left Hunter's work unchanged, for he was an evolutionist; but, fortunately for us, he studied the evolution of function rather than form. For medical men it is function rather than structure which matters. Hence it is that when we have deducted those parts of Hunter's labors which have been displaced by the progress of knowledge, there still remains a vast fund of permanent value, not only for us now, but for generations to come. I propose to pass in review only those parts of his writings which bear on the restoration of action to limbs and joints."

For the most part the book is composed of biographical data bearing on the steps in the development of methods of prophylaxis and treatment of deformities following traumatism. Chapter 1 is devoted to John Hunter, Chapter 2 to John Hilton, Chapter 3 to Hugh Owen Thomas, and so on. The contributions of Little, Stromeyer, Marshall Hall, Duchenne, Lucas-Championnière and many others are given more or less space in the various chapters.

Americans come in for their share of consideration. Philip Syng Physick, sometimes called "the Father of American Surgery" and Lewis A. Sayre, the first to use plaster-of-Paris jackets in spinal curvature, and a number of others are prominently mentioned, but Missourians will find particularly attractive the space given to that brilliant St. Louisan of several decades ago, Dr. Louis Bauer. Almost forgotten in the city where he lived for many years he is described by this English author as a pioneer worker and thinker in orthopedic surgery.



Chapter 20, entitled "Bone-Setting—Ancient and Modern," is devoted principally to the part played by charlatans and irregular practitioners, of which England has always had its share. We miss, however, the names of several quackish cults which have originated in the United States and enjoy a certain popularity on this side of the water but which have not attained such prominence in England so as to warrant consideration by the author.

The title of Nicolas Andry's book is given as "orthopedia" and also as "orthopaedia" and William Detmold is persistently "Ditmold." These minor inaccuracies can be eliminated in future editions. The book contains a number of portraits and other illustrations. R. E. S.

**CHEMISTRY FOR NURSES.** By Fredus N. Peters, A.M., Ph.D., Author of "Experimental Chemistry," "Laboratory Experiments," "Modern Chemistry," etc. With illustrations. St. Louis: C. V. Mosby Company, 1919. Price, \$1.75.

The author has produced a book that would be a very useful addition to the library of every nurse. It is very practical, covers the essential points and wisely does not attempt to cover the entire field. Nurses will find it interesting.

The illustrations are good, the text is clear, and the typographical work is all that can be desired.

O. H. C.

**THE PRACTICAL MEDICINE SERIES.** Comprising Eight Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Charles L. Mix, A.M., M.D. Volume II. General Surgery Edited by Albert J. Ochsner, M.D., Surgeon-in-Chief, Augustana and St. Mary's of Nazareth Hospitals, etc. Series 1919. Chicago: The Year Book Publishers, 304 South Dearborn Street.

These year books have been with us so long that like the family cat their presence fails to excite examination as to their worth. Nevertheless, if we rouse ourselves from this lethargy we must come to realize that there never has been a series of year books at once so convenient and so useful. No plan could have been devised which would give the reader such a good review of the doings in specialties other than his own. Even in his own field, as one can readily prove, he will find much that he has overlooked in the perusal of the year's journals, and although we may have read the original articles a brief résumé is valuable to recall the slumbering facts previously collected. Not the least valuable feature in this volume is the numerous comments by the editor. As an example may be cited the advice to use granulated sugar on sloughing cancer of the breast. A. E. H.

**CEREBROSPINAL FLUID IN HEALTH AND IN DISEASE.** By Abraham Levinson, B.S., M.D., Associate in Pediatrics, Northwestern University Medical School; Associate Pediatrician, Sarah Morris Children's Hospital of the Michael Reese Hospital, Chicago, etc. With a Foreword by Ludvig Tektoen, M.D. With fifty-six illustrations, including five color plates. St. Louis: C. V. Mosby Company, 1919. Price, \$3.50.

When one considers the apparent care the author has given in the preparation of this work, its freedom from dogmatic statements, his effort to state in plain language all that is known about the cerebrospinal fluid in health and in disease, to give due consideration to the work of others and to realize that there are still many problems in connection with this fluid requiring solution, one receives the impression that the author has really expressed himself in its every page and that he himself is the embodiment of the ideal physician indicated in his dedication.

In his foreword Dr. Hektoen states that this book supplies a definite want, "For in spite of an increasing importance in medicine, there was as yet no comprehensive book on all phases of the cerebrospinal fluid."

It is unusual in this day of over-production in medical literature to find a book which deserves only commendation and the kindest criticism. It is a book of facts. All that is definitely known about cerebrospinal fluid is found in its pages and therefore it must be of great value to every one engaged in the practice of medicine. Knowledge of the nature of cerebrospinal fluid is of such a fundamental character that information about it in health and in disease should be a part of the education of every physician.

The book should be widely read that the known facts therein accessible may be more generally utilized by the profession. It is well illustrated and a splendid example of the bookmaker's art. W. W. G.

**QUARTERLY MEDICAL CLINICS.** April, 1919. St. Louis: Medicine and Surgery Publishing Company.

These clinics are from the service of Dr. Frank Smithies at the Augustana Hospital, Chicago, and comprise a highly interesting series of cases. One reads the descriptions of the cases with a growing sensation of astonishment because there is no semblance of the ordinary routine, trite nature of case histories so generally seen in case reports. Without doubt the editor of these clinics is a master of English and has the unusual talent of presenting his topics in most entertaining style and with an informing spirit. The volume comprises over 400 pages and is indexed both as to symptomatology and by diagnosis, an innovation that is exceedingly helpful to the searcher. The price of one copy is \$1.50, annual subscription, \$5.

**TRAINING SCHOOL METHODS FOR INSTITUTIONAL NURSES.** By Charlotte A. Aikens, Author of "Studies in Ethics for Nurses," etc. 12mo of 337 pages. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$2.25 net.

This is one of the most helpful books on this subject not only to the superintendent of nurses but of practical value and inspiration to every institutional nurse.

The opening chapter, "The Training School Task," deals with the various problems of the training school, the difficulty of transforming raw recruits into efficient workers by making clear the distinction between principles and prejudices, in the development of a harmonious and practical working system, building ideals and shaping right judgment, all of which the author says is clearly part of the training school responsibility.

The author states that "the character of the pupils will determine, to a large extent, the quality of the work done." How many times this point has been proved in our training schools! The quality of the work done has shown us the character of the nurse.

The chapters all impress the reader with the clear judgment and wide hospital experience of the author. If every institutional nurse would read Miss Aiken's book we would have better team work, more efficient service and better able to interpret to the full the real spirit of the institution. P. B. F.

**THE PRINCIPLES OF NURSING.** By Charlotte A. Brown, R.N., Superintendent of Nurses in the New England Hospital for Women and Children, etc. Illustrated. Philadelphia and New York: Lea & Febiger, 1919. Price, \$1.75.

This little book is well written and outlined and will be most helpful to the nurse in the first year of her training. Quoting from the author's preface, "While the book is essentially elementary, the text covers the general fundamental principles of nursing." C. E. E.

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